

Exhibit 23

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Motions, Pleadings and Filings

Only the Westlaw citation is currently available.

United States District Court,
 N.D. California.
 SLIPTRACK SYSTEMS, INC. a California
 Corporation, Plaintiff,
 v.
 STEELER METALS, INC., a Washington
 Corporation, Matt Surowiecki, an individual
 and Does 1 through 50, inclusive Defendants.
 No. C-04-0462 PVT.

Oct. 12, 2004.

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 Defendants.

ORDER GRANTING DEFENDANTS' MOTION FOR SUMMARY JUDGMENT

TRUMBULL, Magistrate J.

*1 This action involves a lawsuit by Sliptrack Systems, Inc. ("Sliptrack" or "Plaintiff"), the manufacturer of slotted defection track systems and the owner of U.S. Patent No. 5,127,760 (the "'760 Patent"), against Steeler Metals ("Steeler" or "Defendant"), a company that makes and sells sheet metal framing products, and its President, Matt Surowiecki (collectively, "Defendants"). Sliptrack contends that the sheet metal framing products sold by Steeler infringe upon the '760 patent.

Now before the court is Defendants' Motion for Summary Judgment. Having considered the parties' arguments and submissions, and for the reasons set forth below, the court hereby enters the following memorandum and order.

BACKGROUND

Sliptrack is the owner of the '760 patent for a Vertically Slotted Header. As described in the "Field of the Invention," the '760 patent relates to a "building

construction assembly and, more particularly, to a header for allowing horizontal, non-load bearing headers to vertically fluctuate in relationship to vertical non-load bearing wall studs to which the headers are attached. By allowing the header freedom of vertical movement, the walls that are fixed to the vertical studs are protected from cracking because the freedom of vertical movement of the header prevents translation of mechanical stresses to the walls caused by downward, environment forces on the header." *See* Barnard Decl., Exh. A.

Plaintiff Sliptrack contends that Defendants infringe independent claims one and seven of the '760 patent. Claim construction of the term "having at least one hole formed therein" is the textual determinative issue in this case and is identical in both claims one and seven. [FN1] The hole referred to in this disputed claim language is formed in the non-load bearing wall studs. Defendant Steeler contends that the hole must be formed prior to inserting the stud into the header during assembly of the device. By contrast, Sliptrack asserts that the patent is for a product only, not a process, and that, accordingly, the claim at issue calls only for a hole to be formed in the stud as ultimately assembled in the device irrespective of whether it is formed before or after inserting the stud into the header.

FN1. Because the disputed claim language is identical in claims one and seven, the court limits its discussion to claim one.

On July 26, 1990, Todd A. Brady, the inventor, filed a patent application which eventually issued as the '760 patent. The application as originally filed contained nine claims, including the following claim one:

A building construction assembly that includes a header and a stud wherein the header is capable of vertical movement relative to said stud comprising:
 a header having a web and flanges with said flanges connected to said web;
 at least one of said flanges having at least one vertical slot therein;
 a stud having a width less than the distance between said flanges of said header;
 said stud being aligned with said vertical slot; and
 an attachment means passing through said slot to unit said header to said stud whereby said slot permits said header to move vertically with respect to said stud while restricting horizontal movement of said header.

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*2 See '760 Patent Application, Barnard Decl., Exh. B. In the first office action, the PTO rejected all nine claims under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See Action by PTO, Barnard Decl., Exh. C. Specifically, in his rejection of claim one, the PTO examiner questioned "how is the stud aligned with the vertical slot." See Action by PTO, Barnard Decl. Exh. C.

In response, the applicant amended the claims and, in particular, amended claim one to read as follows, with deletions in brackets and additions underlined:

A building construction assembly that includes a header and a stud wherein the header is capable of vertical movement relative to said [stud] *assembly* comprising:

a header having a web and flanges with said flanges connected to said web;

at least one of said flanges having at least one vertical slot therein;

a stud having a width less than the distance between said flanges of said header *and having a top end*;

said stud [being aligned with said vertical slot] *having at least one hole formed therein proximal to said top end; [and] said top end fitting between said flanges perpendicular to said header positioned so that said hole is aligned with said vertical slot; and*

an attachment means passing through said slot to [unit] *slideably unite* said header to said stud whereby said slot permits said header to move vertically with respect to said stud while restricting horizontal movement of said header.

See Amendment to '760 Patent Application, Barnard Decl., Exh. D. In this amendment, *inter alia*, applicant changed the text of claim one such that the stud no longer was aligned with the vertical slot and, instead, the *hole* was aligned with the slot. Further, in the remarks section of the Amendment, counsel for applicant stated that:

the Examiner's question of how the stud is aligned with the vertical slot has been answered by adding hole 22 proximal to top end [] of the stud as an element of the claims. The hole serves as a reference point on the stud which is used to align the stud and the slot. This amendment should overcome the Examiner's § 112 rejection based upon indefiniteness with respect to claim 1 and the claims dependent therefrom.

See Amendment to Patent Application, Barnard Decl., Exh. D. Ultimately, in 1992, following this

amendment, the '760 patent issued with the above-stated language in claim one.

The written description of the '760 patent, which is the same as the description in the patent application prior to amendment, sets forth two methods of assembly for the preferred embodiment—one with a hole formed after the stud is inserted into the header and the other with a pre-drilled hole. First, the "preferred method for assembling the invention" describes placing the end of the stud between the flanges of the header so that the end abuts against the bottom of the web such that the header and the stud are perpendicular to each other and a vertical slot is generally centered on the side of the stud. An appropriate attachment means, such as a self-tapping screw, is positioned in the slot midway between the bottom of the slot and the top of the slot. Once positioned, the self-tapping screw is drilled into the stud. This method of assembly clearly calls for the hole in the stud to be formed *after* the stud is inserted into the header.

*3 Second, the description discloses "another method of assembling the invention," which states, in relevant part, that "holes are pre-drilled in the stud. The stud is then inserted between the flanges so that the holes in said stud are aligned with the slots. The attachment means passes through the slots and through the hole in the stud." This method clearly calls for the hole to be formed in the stud *before* it is placed in the header.

Defendant Steeler manufactured and sold slotted metal track. Sliptrack sued Steeler, alleging that Steeler's manufacture and sale of this slotted track contributes to and induces infringement of the '760 patent. Steeler Metals now moves for summary judgment of non-infringement, contending that, because it does not sell or manufacture products with pre-drilled holes nor does it instruct its customers to pre-drill holes in the studs before inserting them into the headers, as required under its construction of claim one, it does not infringe the '760 patent and should prevail as a matter of law.

STANDARD FOR SUMMARY JUDGMENT [FN2]

FN2. Plaintiff contends that on the issue of claim construction, summary judgement is inappropriate and that the court instead must conduct a detailed, limitation-by-limitation construction of each of the asserted claims pursuant to what commonly is referred to as a *Markman* hearing. Plaintiff is incorrect. As the Federal Circuit has made clear, "*Markman*" does not require a district court to follow any

particular procedure in conducting claim construction. It merely holds that claim construction is the province of the court, not a jury." *Ballard Medical Products v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed.Cir.2001). "If the district court considers one issue to be dispositive, the court may cut to the heart of the matter and need not exhaustively discuss all other issues presented by the parties." *Id.*

Summary judgment is appropriate when there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. Pro. 56; *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). Summary judgment may be granted in favor of defendant on an ultimate issue of fact where the defendant carried his burden of "pointing out to the district court that there is an absence of evidence to support the non-moving party's case." *Celotex Corp. v. Catrett*, 477 U.S. 317, 325, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). "In determining whether there is a genuine issue of material fact, the evidence must be viewed in the light most favorable to the party opposing the motion, with doubts resolved in favor of the opponent." *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*, 145 F.3d 1303, 1307 (Fed.Cir.1998).

DISCUSSION--INFRINGEMENT

A determination of infringement requires a two-step analysis. See *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1476 (Fed.Cir.1998). "First the claim must be properly construed to determine its scope and meaning. Second the claim, as properly construed, must be compared to the accused device or process." *Id.* (quoting *Carroll Touch, Inc. v. Eletro Mechanical Sys., Inc.*, 15 F.3d 1573, 1576 (Fed.Cir.1993)). "In order for a court to find infringement, the plaintiff must show the presence of every element or its substantial equivalent in the accused device." *Wolverine World Wide, Inc. v. Nike, Inc.*, 38 F.3d 1192, 1199 (Fed.Cir.1994).

Claim construction is an issue of law. See *Markman v. Westview Instruments, Inc.*, 52 F.ed 967, 970-71 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Determination of infringement, whether literal or under the doctrine of equivalents, is a question of fact. See *Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed.Cir.1998). However, in a patent litigation action, "[w]here the parties do not dispute any relevant facts regarding the accused product ... but disagree over possible claim

interpretations, the question of literal infringement collapses into claim construction and is amenable to summary judgment." ' *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319, 1324 (Fed.Cir.2002) (quoting, *Gen. Mills, Inc. v. Hunt-Wesson, Inc.*, 103 F.3d 978, 983 (Fed.Cir.1997)) (citations omitted).

A. Claim Construction

*4 The dispositive issue of claim construction here is whether claims one and seven of the '760 patent are limited to a stud with a hole drilled prior to inserting the stud into the header or whether the claims encompass products without such a pre-drilled hole.

Defendant Steeler asserts that the claim term "having at least one hole formed therein" in claims one and seven unambiguously requires that a hole be pre-drilled into the stud and, thus, excludes any devices where the hole is made by a self-tapping screw after the stud is inserted into the header. Steeler contends that, even though the preferred embodiment discloses a preferred method of assembly where the hole is formed *after* the stud and header are assembled, the claims should be limited to a device with a pre-drilled hole, because the scope of Sliptrack's right to exclude is governed by the language of the claims, as interpreted by the prosecution history, and not by the written description.

For its argument, in addition to the claim language, Steeler relies heavily on the patent's prosecution history. Specifically, Steeler points to the amendment to the patent application, wherein, to address the examiner's indefiniteness rejection, applicant revised the claim from providing that the stud was aligned with the vertical slot to providing that the *hole* "is aligned with said vertical slot." See Amendment to '760 Patent Application, Barnard Decl., Exh. D. In addition, Steeler points to the applicant's remarks in the amendment where he stated that "the hole serves as a reference point on the stud which is used to align the stud and the slot." See Amendment to '760 Patent Application, Barnard Decl., Exh. D. The thrust of Steeler's argument is that in order for the "hole formed therein" to serve as a reference point when aligning the stud with the vertical slot, the hole must be formed in the stud prior to inserting it into the header and, thus, it must therefore be pre-drilled.

In response, Sliptrack contends the claim language makes clear that, as ultimately assembled, the stud must have a "hole formed therein," but does not mandate any particular process for when such a hole shall be formed. Sliptrack does not see any

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inconsistency with this position and the text requiring that the "hole is aligned with said vertical slot" and argues that in either case, pre or post-drilled, the hole formed in the stud will be aligned with the slots when the device is assembled. Finally, Sliptrack contends that it would be improper to construe the claim to require a pre-drilled hole, because such a construction would read out the preferred method of assembly, which describes a self-tapping screw to form the hole after the stud is inserted into the header. Sliptrack does not address Steeler's argument regarding the remarks made during the prosecution history that the hole will serve as a "reference point" when aligning the stud with the vertical slot.

The court begins claim construction analysis with the words of the claim. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). The claim language defines the bound of claims scope. *Bell Communications Research, Inc. v. Vitalink Communications, Corp.*, 55 F.3d 615, 619-20 (Fed.Cir.1995). The words used in the claims are interpreted in light of the intrinsic evidence of record, including the written description, the drawings and the prosecution history, if in evidence. *Interactive Gifts Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323 (Fed.Cir.2001). The intrinsic evidence may provide context and clarification about the meaning of the claim terms. *York Products, Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed.Cir.1996). "Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." *Vitronics*, 90 F.3d at 1582.

*5 This case presents an interesting question and a somewhat difficult resolution. The court agrees with Plaintiff Sliptrack that the claims and the written description, read alone, do not appear to require a pre-drilled hole. The claims at issue, one and seven, provide that the stud will have at least "one hole formed therein proximal to said top end" and that the header shall be "positioned so that said hole is aligned with said vertical slot." See '760 patent, Barnard Decl., Exh. C. A fair reading of this language supports Sliptrack's argument that, as ultimately assembled, the stud will have a hole aligned with the vertical slot. The court agrees that this text, on its face, does not mandate that the hole be pre-drilled. If the claims and the written description were the only evidence the court was relying upon to interpret the claims, Sliptrack likely would prevail. That is not the case, however. In addition to the claims and the written description, the court must also consider the prosecution history, which, here, is dispositive.

As the Federal Circuit has made clear, "[a]rguments and amendments made during prosecution of a patent application *must* be examined to determine the meaning of the claims." *Rheox*, 276 F.3d at 1325 (citing *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 15765 (Fed.Cir.1995)) (emphasis added). "The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution." *Id.*; see also *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1326 (Fed.Cir.2002).

When initially submitted, all nine claims in the application for the '760 patent were rejected for indefiniteness and, specifically, the examiner questioned "how is the stud aligned with the vertical slot." See Action by PTO, Barnard Decl. Exh. C. To overcome this rejection, applicant revised his claims to include specific language that there would be a hole formed and positioned so that the *hole* is aligned with the vertical slot. See Amendment to '760 Patent Application, Barnard Decl., Exh. D (emphasis added). Counsel for applicant then explicitly remarked that this change answered the examiner's question "by adding hole 22 proximal to top end 40 of the stud as an *element of the claims*. The hole serves as a *reference point* on the stud which is used to align the stud and the slot." See Amendment to '760 Patent Application, Barnard Decl., Exh. D (emphasis added).

From this amendment and the remarks therewith, the court cannot escape the conclusion that the claim was narrowed to require that a hole be pre-drilled in the stud prior to inserting the stud into the header. As originally drafted, claim one provided that the *stud* was aligned with the vertical slot, but then was amended to require that the *hole* be aligned with the vertical slot. In order for the hole to be aligned with the vertical slot and to serve as a "reference point" on the stud when used to align the stud and the slot, the hole, by definition, would have to be formed prior to inserting the stud into the header. Quite simply, the hole cannot serve as a reference point if it does not exist.

*6 While the court is aware that such a construction will read out the preferred method of assembly, which discloses a method where the hole is formed by a self-tapping screw *after* the stud is inserted into the header, this result, while perhaps unusual, is nevertheless permissible. See *Rheox*, 276 F.3d at 1327; see also *Elektta Instruments S.A. v. O.U.R. Scientific Int'l., Inc.*, 214 F.3d 1302, 1308 (Fed.Cir.2000). Because it is rare that a construction reading out the preferred

embodiment will be the correct construction, the Federal Circuit has noted that such a construction requires "highly persuasive evidentiary support." *Id.* Sliptrack asserts that prosecution history is not the type of "highly persuasive evidence" sufficient to support such a construction. Sliptrack is incorrect, however, and the Federal Circuit has stated just the opposite. *Id.* ("[W]here the prosecution history requires a claim construction that excludes some but not all of the preferred embodiments, such a construction is permissible and meets the standard of 'highly persuasive evidentiary support' "). Indeed, it is difficult to imagine evidence more "highly persuasive" than Sliptrack's remarks in its Amendment stating that the hole will be used as a reference point to align the stud with the vertical slot. Sliptrack relinquished its right to exclude products without a pre-drilled hole when it amended its claim and provided this explanation to the PTO to overcome the indefiniteness rejection.

Sliptrack vigorously defended its position at the summary judgment hearing by asking the court to distinguish "product" patents and "process" (or method) patents, arguing that the '760 patent is for a product, not a process and, thus, the order or method of assembly is not at issue, and it is not relevant when the hole in the stud is formed. Instead, Sliptrack asserted, in construing the claim, the court must look at the final product, which, by necessity, must include a "hole formed therein" and that such hole always will be aligned with the slots as long as the product is properly assembled.

Sliptrack's argument is persuasive and is supported by the written description, which provides two possible methods of assembly, one using a self-tapping screw after the stud is inserted into the header and one where the hole is pre-drilled. Presumably, the applicant would not have provided two "possible" methods of assembly if the patent itself was for a particular process or method. Despite what may have been intended by the inventor in theory, however, the court must rely on the objective, intrinsic evidence in the record. *See Rheox*, 276 F.3d at 1327 ("Reading the written description alone, this argument might be effective, but in light of the prosecution history, which was generated after the written description was drafted, it is apparent that Rheox relinquished any coverage of TSP."). Sliptrack simply cannot escape the prosecution history of the '760 patent, where, though perhaps unintentionally, counsel added an element of method or process by amending the claim in the manner he did and by noting that the hole would serve as a "reference point."

*7 The PTO examiner initially rejected patentee's claims for indefiniteness. To address the examiner's concern, overcome the rejection, and get the application approved, counsel amended the claims as set forth above and filed the relevant remarks therewith. While there may have existed an alternative approach to address the examiner's concerns, this was the way prosecution counsel chose to confront the rejection. The court must construe the claims accordingly and cannot undo, by ignoring the prosecution history, what may have been an unintentional result by counsel. In addition to a patent's definitional function, the Supreme Court and the Federal Circuit have consistently recognized the paramount importance of a patent's public notice function, and "the public has a right to rely on such definitive statements made during prosecution." *Rheox*, 276 F.3d at 1325 (quoting *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1347 (Fed.Cir.1998)); *see also Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 117 S.Ct. 1040, 137 L.Ed.2d 146, (1997); *Vectra Fitness v. TNWK Corp.*, 162 F.3d 1379, 1384 (Fed.Cir.1998) ("The public is entitled to rely upon the public record of a patent in determining the scope of the patent's claims"). Given the prosecution history, the court only can construe claims one and seven as requiring a pre-drilled hole.

B. Comparison to the Accused Device

Next, having construed the disputed claim language, the court must compare the relevant claims of the '760 patent to the accused device, which here is the slotted vertical track sold by Defendant Steeler. "In order for a court to find infringement, the plaintiff must show the presence of every element or its substantial equivalent in the accused device." *Wolverine World Wide, Inc. v. Nike, Inc.*, 38 F.3d 1192, 1199 (Fed.Cir.1994). Therefore, because the court has construed claims one and seven of the '760 patent to require that the "hole formed therein" be one that is pre-drilled, Steeler will only be liable for literal infringement if the products it manufactures and sells include such pre-drilled holes (direct infringement) or if it instructs its customers to assemble the device with a pre-drilled hole (contributory or induced infringement). Steeler contends that it does neither.

To support this contention, Steeler submitted evidence in the form of a declaration from Matt Surowiecki, a defendant in this action and the President of Steeler Metals. In his declaration, Mr. Surowiecki stated that "Steeler Metals, Inc. sells steel framing products including horizontal framing members, termed 'tracks',

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and vertical framing members, termed 'studs', but does not assemble them." Surowiecki Decl. at ¶ 2. Mr. Surowiecki further asserted that the studs it sells "do not have pre-drilled holes in their upper end portions for use to align the studs with a selected slot in the upper track, or for any other purpose." Surowiecki Decl. at ¶ 3. Finally, with regard to the use of the slotted tracks and studs by Steelers customers, Surowiecki explained that its customers assemble the slotted tracks and studs using the self-tapping screw method after the stud is inserted into the header, and further stated that neither he nor "Steeler Metals, Inc. have ever instructed a customer to first drill a hole in the upper end portion of the stud and then use that hole to align the stud with a selected slot in the slotted track." Surowiecki Decl. at ¶¶ 7 and 8.

*8 Sliptrack, in response, argues that Steeler's proffered evidence on the manufacture and sale of its products and use by its customers is insufficient and raises genuine disputes of fact. Specifically, Sliptrack contends that Mr. Surowiecki's declaration is not based on personal knowledge, does not contain the specific assembly instructions that are provided to Steeler's customers, that Steeler has contradicted itself on the sale of slotted track purchased from Metal Lite, Inc., another company that Sliptrack has accused of infringement, and that Steeler has failed to respond to discovery on the issue.

Sliptrack, however, as it must to defeat summary judgment, has not produced any specific evidence to counter Mr. Surowiecki's statements and create a genuine issue for trial. *See* Fed. R. Civ. Pro. 56(e) ("When a motion for summary judgment is made and supported as provided in this rule, an adverse party may not rest upon the mere allegations or denials of the adverse party's pleading, but the adverse party's response, by affidavits or as otherwise provided in this rule, must set forth specific facts showing that there is a genuine issue for trial. If the adverse party does not so respond, summary judgment, if appropriate shall be entered against the adverse party"). Moreover, while Sliptrack contends that Steeler's discovery responses are inconsistent, Steeler stated repeatedly in its responses that the company does not manufacture products or instruct its customers to assemble products in such a way as to infringe the '760 patent, statements which both support the declaration of Matt Surowiecki. *See* Min Decl., Exhs. 2 and 3. Given that the court has construed claims one and seven of the patent in the manner advocated by Steeler--to include the pre-drilled hole--the evidence produced by Steeler is consistent with a finding of non-infringement. Sliptrack has

provided no specific counter evidence, nor has it provided to the court any discovery it believes will support its position and raise a genuine dispute as to whether Steeler sells or instructs its customers to assemble devices in an infringing manner. [FN3]

FN3. Indeed, the court notes that, in his deposition for the lawsuit against Metal Lite, the inventor of the '760 patent confirmed that he was not aware of anyone using his product with studs that have pre-drilled holes. *See* Min Decl., Exh. 6, p. 13.

Accordingly, the court only can conclude, based on the evidence before it, that there is no genuine dispute of material fact with regard to the products Steeler sells or as to the assembly instructions it provides to its customers. Because Steeler does not sell studs with pre-drilled holes nor instruct its customers to assemble the studs in such a way, the court therefore finds no literal infringement as a matter of law.

C. Doctrine of Equivalents

Finally, having found no literal infringement, the court must consider the doctrine of equivalents. "The scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 533 U.S. 722, 732 (2002). Here, however, given the prosecution history of the '760 patent, Plaintiff is estopped from asserting the doctrine of equivalents.

*9 "Prosecution history estoppel requires that the claims of a patent be interpreted in light of the proceedings in the PTO during the application process. Estoppel is a rule of patent construction that ensures that claims are interpreted by reference to those that have been cancelled or rejected." *Id.* at 733 (internal citations and quotations omitted). In *Festo*, the Supreme Court made clear that,

[w]hen ... the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, he may not argue that the surrendered territory comprised unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent.

Id. at 733-34. "Estoppel arises when an amendment is made to secure the patent and the amendment narrows the patent's scope." *Id.* at 736. That is, estoppel arises when an amendment is made for a reason related to patentability. While such a narrowing amendment is not a complete bar to asserting the doctrine of equivalents in every case, *Festo*, 535 U.S. at 737, it

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will operate as an estoppel unless "the patentee [can] show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent." *Id.* at 741. Under *Festo*, therefore, the patentee bears the burden of proving both that the amendment was *not* related to patentability *and* that the amendment does not surrender the particular equivalent in question. *Id.* at 740-41.

Given the prosecution history here and the other evidence in the record, the court cannot conclude that the patentee has rebutted the presumption that estoppel applies and that the equivalent at issue--the hole made in the stud by a self-tapping screw after the stud is placed into the header--has been surrendered. The amendments to the application for the '760 patent and the remarks therewith regarding use of the hole as a reference point were made to address the patent examiner's indefiniteness rejections and, thus, were amendments related to patentability under § 112. Further, Plaintiff cannot contend that the equivalent at issue was unforeseeable or that the amendment did not surrender the particular equivalent at issue. Indeed, as discussed above, the very equivalent in question was disclosed in the specification as a "preferred method of assembly." Plaintiff, therefore, is estopped from asserting the doctrine of equivalents as to a hole formed by a self-tapping screw, or other similar means, after the stud is inserted into the header.

This result is also required by two recent cases out of the Federal Circuit in which the court discusses what it terms the "disclosure-dedication" rule. *See Johnson & Johnston Assoc., Inc. v. R.E. Service Co., Inc.*, 285 F.3d 1046, 1054 (Fed.Cir.2002); *see also PSC Computer Products, Inc. v. Foxconn Int'l, Inc.*, 355 F.3d 1353, 69 U.S.P.Q.2d 1460, 1465 (Fed.Cir.2004). In both *Johnson & Johnston* and *PSC Computer Products*, the court addressed the situation where, as here, the claims were narrower in scope than that set forth in the written description. The court concluded that, in such a scenario, the material disclosed in the description but not included within the scope of the claims was thereby dedicated to the public and could not be claimed under the doctrine of equivalents. *See Johnson & Johnston*, 285 F.3d at 1054 ("[W]hen a patent drafter discloses but declines to claim subject matter, as in this case, this action dedicates the unclaimed subject matter to the public"); *see also, PSC Computer Products*, 355 F.3d 1353, 69 U.S.P.Q.2d at 1464 ("We thus hold that if one of ordinary skill in the art can understand the unclaimed disclosed teaching upon reading the written description, the alternative

matter disclosed has been dedicated to the public"). Reciting the fundamental principle that the claims define the limits of patent protection, the *Johnson & Johnston* court noted that "[a]pplication of the doctrine of equivalents to recapture subject matter deliberately left unclaimed would 'conflict with the primacy of the claims in defining the scope of the patentee's exclusive right.'" *Johnson & Johnston*, 285 F.3d at 1054 (quoting *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1424 (Fed.Cir.1997)).

***10** The disclosure-dedication rule must apply here where Sliptrack claimed narrowly but then disclosed as a "preferred method of assembly" use of a self-tapping screw to form the hole in the stud *after* it is inserted into the header. This disclosure is dedicated to the public and cannot be reclaimed under the doctrine of equivalents. In other words, as highlighted by the court in *Johnson & Johnston*, Sliptrack "cannot narrowly claim an invention to avoid prosecution scrutiny by the PTO, and then, after the patent issuance, use the doctrine of equivalents to establish infringement because the specification discloses the equivalents." *Id.*

Hence, under either the principle of prosecution history estoppel or the disclosure-dedication rule, Sliptrack may not claim that a product which uses a self-tapping screw (or other similar attachment means) to form a hole in the stud after it is inserted into the header is a substantial equivalent of that claimed in the '760 patent. The court therefore finds no infringement on this basis.

CONCLUSION

For the foregoing reasons, the court hereby GRANTS Defendants' Motion for Summary Judgment of non-infringement of the '760 patent. Given the prosecution history of the patent, the court only can conclude that the proper construction of claims one and seven requires that a hole be pre-drilled into the stud before it is inserted into the header. Under such a construction, there is no literal infringement. Defendants do not manufacture devices with pre-drilled holes, nor do they instruct their customers to assemble the device in such a way--a fact which Plaintiff has raised no material evidence to dispute. Finally, Plaintiff may not claim infringement under the doctrine of equivalents. Accordingly, the court concludes that Defendants are entitled to a judgment of non-infringement as a matter of law.

IT IS SO ORDERED.

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(N.D.Cal.)

Damages. and Injunctive Relief for Infringement of
U.S. Patent No 5, 127, 760 (Feb. 03, 2004)

Motions, Pleadings and Filings (Back to top)

. 5:04cv00462 (Docket) (Feb. 03, 2004)

. 2004 WL 3577568T1 (Trial Pleading) Complaint for

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Exhibit 24

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United States District Court,
 N.D. California.
 BIO-RAD LABORATORIES, INC., Plaintiff,
 v.
 APPLERA CORPORATION, et al., Defendants.
 No. C 02-05946JW.

Aug. 12, 2005.

David Leon Bilsker, Howrey, Simon, Arnold & White,
 San Francisco, CA, Bobby A. Ghajar, Howrey, Simon,
 Arnald & White, Los Angeles, CA, Tracy Jolles
 Holland, Round Rock, TX, Wallace W. Wu, Howrey,
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 Thomas C. Mavrakakis, Winston & Strawn, San
 Francisco, CA, for Plaintiff.

Matthew D. Powers, Vernon M. Winters, Eugene Y.
 Mar, Jeffrey G. Homrig, Pat W. Costello, Weil,
 Gotshal & Manges LLP, Redwood Shores, CA, Alice
 Garber, Kirkland & Ellis LLP, San Francisco, CA, for
 Defendants.

ORDER GRANTING PARTIAL SUMMARY JUDGMENT

WARE, J.

I. INTRODUCTION

*1 This is a patent dispute. Plaintiff, Bio-Rad Laboratories, Inc. ("Bio-Rad"), owns United States Patent No. 5,089,111 (" '111 patent") and asserts that certain products made by Defendant, Applera Corporation ("Applera"), infringe one or more claims of the '111 patent.

The motion presently before the Court is for partial summary judgment. Applera requests partial summary judgment that the chemical, polyacrylamide, is not an equivalent to "a substantially linear polymer selected from the group consisting of methyl cellulose, hydroxypropyl methyl cellulose, hydroxyethyl methyl cellulose, and hydroxybutyl methyl cellulose." '111 patent, 12:22-25. Applera argues that Bio-Rad, is estopped from asserting infringement by the doctrine of equivalents because Bio-Rad made a narrowing amendment to its claims in response to a rejection based on patentability. Bio-Rad disputes Applera's Motion and maintains that its amendment does not preclude it from asserting infringement by the doctrine of equivalents.

The Court held oral argument on November 29, 2004. The parties, with this Court's approval, stipulated to multiple stays proceedings, including staying a decision on Applera's Motion for Partial Summary Judgment. On March 2, 2005, the Court conducted a case management conference. The parties then informed the Court that they were no longer in settlement negotiations, and thus, requested the Court to proceed with its decision on the pending motion. Based on all of the submissions and arguments to date, the Court GRANTS Applera's Motion for Partial Summary Judgment.

II. BACKGROUND

Bio-Rad filed U.S. Patent Application No. 07/303,174 (" '174 application") with the United States Patent and Trademark Office (the "PTO") on January 27, 1989. The '174 application initially contained 27 claims and was entitled, "Electrophoretic Sieving in Gel-Free Media with Dissolved Polymers." Initially filed claims 1 and 27 were the only independent claims. Of these 27 initially filed claims, initially filed claim 1 and initially filed claim 27 are relevant to this discussion.

Initially filed claim 1 of the '174 application read as follows:

1. A method of separating a mixture of sample ions of varying molecular weights in a sample into components, said method comprising electrophoretically passing said sample through a separation column containing a gel-free aqueous solution of a substantially linear polymer having a molecular weight of about 10,000 to about 2,000,000, said molecular weight being within a range of about 0.1 to about 200 times the average molecular weight of said macromolecular species in said mixture, the concentration of said polymer in said solution being sufficient to retard the flow of said species through said separation column to degrees which vary with the molecular weights of said species.

Garber Decl., Exh. 1, ABBR065864. Initially filed claim 27 of the '174 application read as follows:

27. A method of separating a mixture of polynucleotide chains in a sample, said polynucleotide chains each containing from about 10 to 10,000 base pairs, said method comprising electrophoretically passing said sample through a capillary column containing a gel-free aqueous solution of a substantially linear polymer selected from the group consisting of methyl cellulose, hydroxypropyl methyl cellulose, hydroxyethyl methyl cellulose, and hydroxybutyl methyl

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cellulose, said polymer characterized in terms of the viscosity of a 2% aqueous solution thereof being within a range of about 1,000 centipoise to about 10,000 centipoise at 25 NC, and the concentration of said polymer in said solution is from about 0.1% to about 0.5% by weight.

*2 *Id.* at ABBR065868.

The PTO examiner rejected initially filed claims 1-13 of the '174 application as obvious under 35 U.S.C. § 103 in light of the Tietz, *et al.*, *Electrophoresis in Uncrosslinked Polyacrylamide Molecular Sieving and its Potential Applications*, Electrophoresis, 7 1986, 217-220 ("Tietz") and Bode, *SDS-Polyethyleneglycol Electrophoresis: A Possible Alternative to SDS-Polyacrylamide Gel Electrophoresis*, FEBS Lettes, 65(1) (1976) at 56-58 ("Bode"). The examiner stated that because Tietz "successfully performed molecular sieving experiments using non-crosslinked linear polyacrylamide" claims 1-13 would be obvious to the person having ordinary skill in the art. *Id.* at ABBR065889. In the same office action, the examiner allowed initially filed claim 27 without comment.

In response to the office action, Bio-Rad amended initially filed claim 1 to read:

1. A method of separating a mixture of sample ions of varying molecular weights in a sample into components, said method comprising electrophoretically passing said sample through a separation column containing a gel-free aqueous solution of a substantially linear water-soluble cellulose derivative polymer having a molecular weight of about 10,000 to about 2,000,000, said molecular weight being within a range of about 0.1 to about 200 times the average molecular weight of said sample ions [macromolecular species] in said mixture, the concentration of said polymer in said solution being sufficient to retard the flow of said species through said separation column to degrees which vary with the molecular weights of said species.

Id. at ABBR065894-95 (double underlined text indicates addition; bracketed text indicates deletion) (amendment indicia in original). Initially filed claim 27 was unchanged. After Bio-Rad's amendment to initially filed claim 1, the PTO examiner issued a Notice of Allowability.

Following the Notice of Allowability Bio-Rad abandoned the '174 application in favor of a Continuation-in-Part application ("CIP"). Notably, the CIP retained the title of the '174 application, an amended version of initially filed claim 1, and the

original version of initially filed claim 27. The CIP issued as the '111 patent on February 18, 1992.

Amended claim 1 of the abandoned '174 application was again altered in the newly filed CIP. Claim 1 of the CIP read:

1. A method of separating a mixture of sample ions of varying molecular weights in a sample into components, said method comprising electrophoretically passing said sample through a separation column containing a gel-free aqueous solution of a water-soluble polymer selected from the group consisting of cellulose derivatives, saccharide-based and substituted saccharide-based polymers, polysilanes, polyvinylalcohol and polyvinylpyrrolidone, said polymer having a molecular weight of about 10,000 to about 2,000,000, said molecular weight being within a range of about 0.1 to about 200 times the average molecular weight of said sample ions in said mixture, the concentration of said polymer in said solution being sufficient to retard the flow of said species through said separation column to degrees which vary with the molecular weights of said species.

*3 *Id.* at ABBR065950. Initially filed claim 27 from the '174 application was retained, unchanged, as claim 16 of the CIP. The PTO issued a Notice of Allowability for the CIP without any rejections.

However, the PTO included a Statement of Reasons with its Notice of Allowability. The Statement of Reasons recognized that no prior art taught or fairly suggested practicing the method of separating a mixture of sample ions described in claim 1 or claim 16 of the CIP application. Garber Decl., Exh. 3, ABBR065974-75. The examiner recited claims 1 and 16 of the CIP application and underlined the (1) "electrophoretically passing" and (2) "said molecular weight being within a range of about 0.1 to about 200 times the average molecular weight of said sample ions in said mixture" language of claim 1. *Id.* The examiner also underlined the (1) "the group consisting of methyl cellulose, hydroxypropyl methyl, hydroxyethyl methyl cellulose, and hydroxybutyl methyl cellulose," (2) "the viscosity of a 2% aqueous solution thereof being within a range of about 1,000 centipoise to about 10,000 centipoise at 25 NC," and (3) "the concentration of said polymer in said solution is from about 0.1% to about 0.5% by weight" language of claim 16. *Id.* Bio-Rad made no comment on the examiner's Statement of Reasons and the '111 patent issued from the CIP application.

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Bio-Rad filed the present lawsuit against Applera on December 26, 2002. Applera manufactures various performance optimized polymers ("POP") that are used for molecular sieving. Applera's POP products contain polydimethylacrylamide ("PDMA") and combinations of PDMA and polyacrylamide. Bio-Rad claims that the polyacrylamide and PDMA in Applera's POP products represent equivalents to claim 16 of the '111 patent. Thus, according to Bio-Rad, Applera's POP products infringe claim 16 of the '111 patent.

Applera counters that prosecution history estoppel precludes Bio-Rad from asserting the doctrine of equivalents against Applera's polyacrylamide-containing POP products. Applera asserts that Bio-Rad's amendment to initially filed claim 1 in the '174 application was to overcome a rejection related to patentability. Applera notes that initially filed claim 27 contained the same objectionable limitation as initially filed claim 1, that is, "a gel-free aqueous solution of a substantially linear polymer." Applera argues, however, that the PTO allowed initially filed claim 27 without amendment because initially filed claim 27 was limited on its face to a discrete group of chemicals not including polyacrylamide. Thus, Applera asks the Court to find that Bio-Rad's amendment to initially filed claim 1 should also preclude the assertion of infringement against Applera's polyacrylamide-containing POP products by doctrine of equivalents as to initially filed claim 27, now claim 16 of the '111 patent.

III. STANDARDS

Summary judgment is proper "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed.R.Civ.P. 56(c). The non-moving party "must set forth specific facts showing that there is a genuine issue for trial." Fed.R.Civ.P. 56(e). To preclude the entry of summary judgment, the non-moving party must bring forth material facts, i.e., "facts that might affect the outcome of the suit under the governing law ... Factual disputes that are irrelevant or unnecessary will not be counted." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986).

*4 The construction of patent claims is a question of law for the Court. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Likewise, the question of whether prosecution history estoppel applies is a matter

of law for the Court to decide. *Glaxo Wellcome, Inc. v. Impax Laboratories, Inc.*, 356 F.3d 1348, 1351 (Fed.Cir.2004). As such, a question of prosecution history estoppel is properly decided on a motion for summary judgment. *Id.* The moving party "is entitled to summary judgment [on prosecution history estoppel] only if the facts and inferences, when viewed in the light most favorable to [the non-moving party], would not persuade a reasonable jury to return a verdict for ... the nonmoving party." *Id.* (citing *Anderson*, 477 U.S. at 255).

"According to the Supreme Court in *Festo*, 'a narrowing amendment made to satisfy any requirement of the Patent Act may give rise to an estoppel.'" *Glaxo*, 356 F.3d at 1351-52 (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 736, 122 S.Ct. 1831, 152 L.Ed.2d 944 (2002) (*Festo VIII*)). The estoppel is presumptive and may be rebutted if the patentee can show "[1] that the alleged equivalent could not reasonably have been described at the time the amendment was made, or [2] that the alleged equivalent was tangential to the purpose of the amendment, or [3] that the equivalent was not foreseeable (and thus not claimable) at the time of the amendment." *Glaxo*, 356 F.3d at 1532 (citing *Festo VIII*, 535 U.S. at 740-41). An equivalent is foreseeable if the patentee can "show that at the time of the amendment one skilled in the art could not reasonably have been expected to have drafted a claim that would have literally encompassed the alleged equivalent." *Festo VIII*, 535 U.S. at 733.

An amendment to one claim may "infect" another claim with estoppel. *Glaxo*, 356 F.3d at 1356. The Federal Circuit Court of Appeals ("FCCA") has recognized "that subject matter surrendered via claim amendments during prosecution is also relinquished for other claims containing the same limitation." *Id.* The "rule [ensures] consistent interpretation of the same claim terms in the same patent." *Id.*

IV. DISCUSSION

Applera argues that Bio-Rad's amendment to the '174 application in response to the PTO's rejection of initially filed claims 1-13 triggers prosecution history estoppel as to claim 16 of the '111 patent. Bio-Rad counters that prosecution history estoppel should not apply to claim 16 of the '111 patent for several reasons. First, Bio-Rad argues that it overcomes any presumptive estoppel because the use of polyacrylamide would have been unforeseeable at the time of the amendment. Second, Bio-Rad argues that claim 16 of the '111 patent does not contain the same

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limitation as initially filed claim 1 and thus should not be infected by any estoppel applied to initially filed claim 1. Finally, Bio-Rad argues that amending initially filed claim 1, without more, does not link claim 16 of the '111 patent to initially filed claim 1 such that claim 16 should be subject to prosecution history estoppel.

A. Presumptive Prosecution History Estoppel

*5 Bio-Rad amended the '174 application in response to the PTO examiner's obviousness rejection. [FN1] Obviousness, under 35 U.S.C. § 103, is a rejection based on patentability under the Patent Act. *See Festo VIII*, 535 U.S. at 736. Bio-Rad's amendment to initially filed claim 1 changed the limitation "gel-free aqueous solution of a substantially linear polymer" to "gel-free aqueous solution of a substantially linear water-soluble cellulose derivative polymer." In both *Warner-Jenkinson* and *Festo VIII* the Supreme Court made "clear that a narrowing amendment may occur when either (1) a preexisting claim limitation is narrowed by amendment or (2) a new claim limitation is added by amendment." *Honeywell Intern. Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1140 (Fed.Cir.2004)(citing *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 30, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997), and *Festo VIII*, 535 U.S. at 728). The addition of "water-soluble cellulose derivative" narrowed initially filed claim 1. Thus, Bio-Rad's amendment of initially filed claim 1 was "a narrowing amendment made to satisfy [the non-obviousness] requirement of the Patent Act [and] may give rise to an estoppel." *Id.*

FN1. Applera contends that the examiner rejected initially filed claim 1 and not initially filed claim 27 because claim 27 was limited to the members of its Markush group, none of which are polyacrylamide. Whereas initially filed claim 1 was limited only by a general description of the attributes of the claimed "substantially linear polymer." Applera cites the examiner's Statement of Reasons that issued with the Notice of Allowability for support of its position. Applera notes that the examiner drew particular attention to the Markush group in initially filed claim 27, now claim 16 and stated that even unamended, the claim avoided prior art references. Applera argues that the examiner's statements imply that the absence of polyacrylamide in the Markush group was the reason it avoided the prior art. The Court notes that initially filed claim 27 appears, on its face, more specific than initially filed claim 1.

Before determining whether Bio-Rad's amendment to initially filed claim 1 infects claim 16 of the '111 patent with prosecution history estoppel, the Court must determine whether prosecution history estoppel applies to initially filed claim 1 and whether Bio-Rad can overcome the presumption.

The effect of finding prosecution history estoppel is that the patentee presumptively surrenders his or her right to use the doctrine of equivalents to recapture "subject matter conceded during prosecution." *Honeywell*, 370 F.3d at 1141; *Glaxo*, 356 F.3d at 1351-52. Here, the PTO examiner rejected initially filed claim 1 because of prior art that "successfully performed molecular sieving experiments using non-crosslinked linear polyacrylamide." Garber Decl., Exh. 1, ABBR065889. In response, Bio-Rad gave up the more general limitation "gel-free aqueous solution of a substantially linear polymer," which includes polyacrylamide, for the more restrictive limitation "gel-free aqueous solution of a substantially linear water soluble cellulose derivative polymer," that does not include polyacrylamide. Thus, unless Bio-Rad can rebut the presumption, it is estopped from asserting that Applera's POP products infringe claim 1 of the '111 patent by way of the doctrine of equivalents. [FN2]

FN2. Indeed, Bio-Rad does not assert that claim 1 of the '111 patent is infringed by Applera's polyacrylamide-containing POP products.

Bio-Rad argues that it overcomes any presumption of estoppel with regard to polyacrylamide because the use of polyacrylamide and PDMA, as it is used in the allegedly infringing products, was unforeseeable at the time of Bio-Rad's amendment. If an "equivalent [was] unforeseeable at the time of the application ... the patentee can overcome the presumption that prosecution history estoppel bars a finding of equivalence." *Festo VIII*, 535 U.S. at 740-41. The FCCA has explained that:

*6 if the alleged equivalent represents later-developed technology (e.g. transistors in relation to vacuum tubes, or Velcro(R) in relation to fasteners) or technology that was not known in the relevant art, then it would not have been foreseeable. In contrast, old technology, while not always foreseeable, would more likely have been foreseeable. Indeed, if the alleged equivalent were known in the prior art in the field of the invention, it certainly should have been foreseeable at the

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time of the amendment.

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 344 F.3d 1359, 1369 (Fed.Cir.2003) (*Festo IX*).

Bio-Rad argues that PDMA and polyacrylamide were not used in combination to electrophoretically separate ions until years after the '174 application was amended. Blanch Decl. ¶ 6. Bio-Rad also argues that the possibility of foreseeability is reduced because there were "well-known problems with using [polyacrylamide] in general as well as the inability to create the proper range of molecular weights for PDMA and mixtures of PDMA and polyacrylamide." Opposition, 18. Furthermore, Bio-Rad offers a list of mechanical problems, purity problems, manufacturing problems, toxicity problems, and implementation problems that it asserts would have made the use of PDMA or a combination of PDMA and polyacrylamide unforeseeable when initially filed claim 1 was amended.

This Court disagrees, however, that the use of PDMA or a combination of PDMA and polyacrylamide was sufficiently unforeseeable at the time of the amendment to overcome the presumption of estoppel. First, Bio-Rad's recitation of "well-known" problems with the use of polyacrylamide and PDMA does not necessarily suggest that it would have been unforeseeable at the time of the amendment that PDMA could represent an equivalent to the subject matter claimed in initially filed claim 1. Indeed, the fact that a chemical is difficult to manufacture or had not yet been used for the purpose claimed does not make it unforeseeable. Cf. *Festo IX*, 344 F.3d at 1369 (stating that transistors, in relation to vacuum tubes, represent an unforeseeable technology).

Second, the PTO examiner made his rejection based on prior art that used polyacrylamide in molecular sieving. [FN3] Thus indicating that in drafting initially filed claim 1 with broad coverage of a "gel-free aqueous solution of a substantially linear polymer," coverage of acrylamides was not only foreseeable, but accomplished. Thus, the Court finds that "at the time of the amendment one skilled in the art could ... reasonably have been expected to have drafted a claim that would have literally encompassed the alleged equivalent." *Festo VIII*, 535 U.S. at 733. Accordingly, the amendment to initially filed claim 1 imposes a presumption of prosecution history estoppel, which Bio-Rad is unable to overcome on grounds of unforeseeability.

FN3. The Court ordered supplemental

briefing on the issue of whether the accused polymers and Tietz's polyacrylamide are different. After reviewing the parties' submissions the Court is satisfied that the accused polymers are sufficiently similar to Tietz's. Accordingly, the rejection based on Tietz suggests that at the time of the amendment the drafter of the '111 patent could have drafted a claim that would have literally encompassed the accused products.

B. Infectious Estoppel

Applera argues that the amendment to initially filed claim 1 creates an estoppel that should be applied to initially filed claim 27, now claim 16 of the '111 patent. Bio-Rad contends that the estoppel should not be applied because the two claims do not contain the same limitation and there was no action by Bio-Rad in the course of the amendment that linked the claims in a way that requires the estoppel to be imposed on claim 16 of the '111 patent.

*7 Although Bio-Rad only amended initially filed claim 1, the same limitation, "gel-free aqueous solution of a substantially linear polymer," was contained in initially filed claim 27. Garber Decl., Exh. 1, ABBR065864, ABBR065868. Bio-Rad argues that because initially filed claim 1 and initially filed claim 27 each claim different ionic separations the amendment to "claim 1 did not add the same limitation ... that is present in unamended claim 16." Opposition, 8. This argument, however, misses the point. Infectious estoppel is a mechanism employed to maintain the consistency of terms and limitations throughout a patent. *Glaxo*, 356 F.3d at 1356 (stating that infectious estoppel is a "quest for consistency" among claim terms). Both claims as initially filed and at the time of the amendment shared identical language. Insofar as the terms shared by the claims present identical limitations, this Court sees no reason why the terms of the limitations would not have been construed alike. The two claims, although to different ionic separations, contained the same limitation. Thus, initially filed claim 27, now claim 16 of the '111 patent does "recite the amended term" and is subject to the same estoppel. *Id.*

Bio-Rad also argues that the estoppel does not apply to claim 16 of the '111 patent unless there exists "some additional basis in combination with the narrowing amendment that justify[es] infecting the unamended claim with the same estoppel and *Festo* presumption as the [claim] that [was] amended to include the same limitation." Opposition, 12. Bio-Rad cites *Builders*

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Concrete, Inc. v. Bremerton Concrete Prods. Co., 757 F.2d 255 (Fed.Cir.1985), for the proposition that prosecution history estoppel is not limited to amendment based estoppel, but may arise in other ways, like argument based estoppel. Bio-Rad then argues that the court in *Glaxo* relied on *Builders* and allowed the infectious estoppel because the patentee failed to respond to the examiner's argument that the amended limitation was critical to all claims. *Id.* (citing *Glaxo*, 356 F.3d at 1356.) Thus, according to Bio-Rad, both the amendment and the argument were necessary bases for applying the infectious estoppel.

This Court does not read *Glaxo* to require an additional basis in combination with a narrowing amendment before infecting an unamended claim with estoppel. Instead, it appears that the FCCA was more concerned with the consistent interpretation of claim limitations than adding prerequisites to the doctrine of prosecution history estoppel. *See Glaxo*, 356 F.3d at 1356 ("Thus, this court directs consistent interpretation of claim terms within a patent in view of the prosecution history."); *see also Am. Permahedge, Inc. v. Barcana, Inc.*, 105 F.3d 1441, 1446 (Fed.Cir.1997) (stating that "identical claim terms used in different

claims must be interpreted consistently" and "under the doctrine of equivalents, we see no reason to assign different ranges of equivalents for the identical term used in different claims in the same patent"). Although argument accompanying an amendment may indicate precisely what subject matter is surrendered, argument is not a necessary basis for applying estoppel to an unamended claim.

*8 The Court finds that Bio-Rad is estopped from asserting that Applera's POP products containing polyacrylamide or PDMA are equivalents to, and thereby infringe, initially filed claim 27, now claim 16 of the '111 patent. Bio-Rad may not use claim 16 of the '111 patent to recover the subject matter it surrendered by amending initially filed claim 1.

V. CONCLUSION

For the reasons stated above the Court GRANTS Applera's Motion for Partial Summary Judgment.

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Exhibit 25

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Motions, Pleadings and Filings

Only the Westlaw citation is currently available.

United States District Court,
 N.D. Illinois, Eastern Division.
 LIQUID DYNAMICS CORPORATION, Plaintiff,
 v.
 VAUGHAN COMPANY, INC., Defendant.
 No. 01 C 6934.

Oct. 1, 2004.

Mark Warren Hetzler, Timothy P. Maloney, Jon A. Birmingham, Fitch, Even, Tabin & Flannery, Chicago, IL, Steven C. Schroer, Fitch, Even, Tabin & Flannery, Boulder, CO, Edward E. Casto, Jr., Friedman Suder & Cooke, Fort Worth, TX, for Plaintiff.

Alan L. Unikel, Louis S. Chronowski, Jr., Seyfarth Shaw, Chicago, IL, Robert J. Carlson, Mark P. Walters, Christensen, O'Connor, Johnson & Kindness, Seattle, WA, for Defendant.

MEMORANDUM OPINION & ORDER

CONLON, J.

*1 Liquid Dynamics Corporation ("Liquid Dynamics") sues Vaughan Company, Inc. ("Vaughan") for infringement of U.S. Patent No. 5,458,414 ("the '414 patent") pursuant to 35 U.S.C. § 271 *et seq.* Liquid Dynamics sells a commercial mixing system called "JetMix." JetMix uses the invention described in the '414 patent to prevent settling and separation of liquid and solid components stored in slurry tanks. Liquid Dynamics claims Vaughan's competitive product, "RotaMix," uses mixing systems covered by the '414 patent. Vaughan counterclaims for invalidity and inequitable conduct. The court granted Vaughan's summary judgment motion on non-infringement of the '414 patent. *Liquid Dynamics Corp. v. Vaughan Company, Inc.*, No. 01 C 6934, 2002 U.S. Dist. LEXIS 14102 (N.D.Ill. Jul. 31, 2002). The Federal Circuit reversed and remanded the case for trial. *Liquid Dynamics Corp. v. Vaughan Company, Inc.*, 355 F.3d 1361 (Fed.Cir.2004). Both parties move *in limine* to bar evidence at trial.

DISCUSSION

I. Standard of Review

Evidence is excluded on a motion *in limine* only if the

evidence is clearly inadmissible for any purpose. *See Hawthorne Partners v. AT & T Technologies*, 831 F.Supp. 1398, 1400 (N.D.Ill.1993). Motions *in limine* are disfavored; admissibility questions should be ruled upon as they arise at trial. *Id.* Accordingly, if evidence is not clearly inadmissible, evidentiary rulings must be deferred until trial to allow questions of foundation, relevancy and prejudice to be resolved in context. *Id.* at 1401. Denial of a motion *in limine* does not indicate evidence contemplated by the motion will be admitted at trial. Instead, denial of the motion means the court cannot or should not determine whether the evidence in question should be excluded before trial. *United States v. Connelly*, 874 F.2d 412, 416 (7th Cir.1989).

II. Liquid Dynamics' Motions *in Limine*

A. Limit Expert Testimony to Disclosed Opinions

1. Liquid Dynamics' Arguments

Liquid Dynamics moves *in limine* to exclude any expert testimony that is new and untimely disclosed. Specifically, Liquid Dynamics asserts that on May 1, 2002, the last day for disclosure of Rule 26(a)(2) rebuttal expert reports, Vaughan submitted a report signed by employees Glen Dorsch and Kent Keeran ("the Dorsch/Keeran report"). On June 10, 2002, the court struck Section III, a purported computational flow dynamics ("CFD") study on a system in Plymouth, Indiana and Section IV, a purported CFD study on another patent, as new and untimely expert opinion. Liquid Dynamics argues that all trial testimony pertaining to Sections III or IV of the Dorsch/Keeran report must be excluded. Liquid Dynamics further contends any new opinion testimony by Dorsch or Keeran regarding infringement or critiques of CFD simulations conducted by Liquid Dynamics' expert, Dr. Lueptow, beyond that disclosed in the original report should also be excluded. Finally, Liquid Dynamics asserts Vaughan should be limited to offering either Dorsch or Keeran to testify about the report in accordance with this court's standing order limiting each party to only one expert witness per subject.

2. Vaughan's Arguments

*2 Vaughan responds that it does not intend to present expert testimony from both Dorsch and Keeran. However, Vaughan asserts both witnesses worked directly on the design, analysis and implementation of some or all of Vaughan's accused systems. Thus, both

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will likely be offered at trial for fact testimony. With respect to Sections III and IV of the report, Vaughan affirms it will not violate the court's order. However, Vaughan contends it originally submitted Sections III and IV in the event Liquid Dynamics' experts testify, despite the absence of any such opinions in their reports, that prior art did not generate a substantial helical flow. If Liquid Dynamics does not offer new testimony, Vaughan will not offer Sections III and IV barred by the court's order.

3. Findings

Fed.R.Civ.P. 26(a) requires disclosure of expert witnesses and their written reports. The rule provides, "these disclosures shall be made at the times and in the sequence directed by the court." Fed.R.Civ.P. 26(a)(2)(c). Failure to comply with Rule 26 precludes a party from using at trial expert testimony that was not timely or fully disclosed. Fed.R.Civ.P. 37(c)(1). The sanction of exclusion is mandatory and automatic unless the party can show its Rule 26(a) violation was either justified or harmless. *Finley v. Marathon Oil Co.*, 75 F.3d 1225, 1230 (7th Cir.1996). The court previously struck Sections III and IV of the Dorsch/Keeran report as untimely disclosed expert opinion. The motion *in limine* to exclude any evidence or testimony relating to Sections III and IV of the Dorsch/Keeran report must be granted. Further, the motion *in limine* to exclude all new opinion testimony by Dorsch or Keeran regarding infringement or critiques of Lueptow's CFD simulations beyond that disclosed in the original Dorsch/Keeran report is granted. Finally, this court's "Standing Order Establishing Pretrial Procedure" limits each party to one expert witness per topic. Liquid Dynamics' motion to preclude Vaughan from presenting both Dorsch and Keeran as experts is moot in light of Vaughan's representation that it will not do so. The motion *in limine* to preclude both witnesses from testifying must be denied.

B. Expert Testimony of Norcross and Bathija

1. Liquid Dynamics' Arguments

Liquid Dynamics seeks to exclude expert testimony by Prakash Bathija, who is on Vaughan's witness list. Liquid Dynamics asserts Bathija is the author of an article entitled "Jet Mixing." However, Bathija was not timely disclosed as an expert witness. The court is asked to limit his testimony to authentication of the article because any testimony beyond authentication would amount to expert opinion. Further, Liquid Dynamics seeks to exclude undisclosed expert opinion

testimony from Ken Norcross, also on Vaughan's witness list. On July 18, 2002, the court struck Norcross' summary judgment declaration as untimely and inappropriate expert opinion not disclosed prior to April 1, 2002, the deadline for disclosure of expert reports. However, Liquid Dynamics is concerned Vaughan will elicit expert opinion from Norcross at trial under the guise of lay opinion.

2. Vaughan's Arguments

*3 Norcross is a former vice-president and director of technology at U.S. Filter Jet-Tech. Vaughan asserts Norcross was identified well before the close of discovery as a witness having knowledge regarding prior art systems. Vaughan contends the court's July 18, 2002 order striking Norcross' declaration acknowledged Norcross' knowledge of certain prior art systems. Vaughan proposes to call Norcross as a lay witness having personal knowledge of prior art, but not as an expert witness. Vaughan assures the court Norcross' testimony is purely factual in nature and he will not be asked to opine on flow patterns. Finally, Vaughan indicates it will not call Bathija as a witness at trial.

3. Findings

Liquid Dynamics' motion regarding Bathija is moot in light of Vaughan's representation that Bathija will not be called to testify. As to Norcross, the July 18, 2002 order specifically ruled that Norcross' conclusory opinions in his summary judgment declaration regarding helical flow patterns of prior art mixing systems were "not lay witness opinion under Fed.R.Evid. 702. The '414 patent and purported prior art helical flow patterns have been the subject of expert testimony by both parties. The analysis of a system's flow patterns is based on technical and scientific data." Further, Norcross' summary judgment declaration lacked sufficient foundation to establish his opinions regarding the validity of the '414 patent and the mixing industry's prior use of the '414 patent's claims were based on personal knowledge. Accordingly, the court struck Norcross' inappropriate and untimely expert testimony. Contrary to Vaughan's assertions, the court did not rule that Norcross is knowledgeable regarding certain prior art systems. Rather, the court indicated four paragraphs of his declaration that explained U.S. Filter Jet-Tech documents were apparently based on personal knowledge.

With proper foundation, lay opinion testimony may be admissible to assist the jury or court understand the

factual issues. *Stagman v. Ryan*, 176 F.3d 986, 995-96 (7th Cir.1999). However, Fed.R.Evid. 701 provides lay witnesses may not opine regarding scientific, technical or other specialized knowledge within the scope of Fed.R.Evid. 702. Lay opinion testimony is "not to provide specialized explanations or interpretations that an untrained layman could not make if perceiving the same acts or events." *U.S. v. Conn*, 297 F.3d 548, 554 (7th Cir.2002). The motion *in limine* regarding Norcross is granted in part. Norcross may not testify to the flow pattern information contained in his summary judgment declaration. With proper foundation evidencing personal knowledge, Norcross' testimony regarding prior art systems is not clearly inadmissible for all purposes. The extent to which Norcross may offer lay opinion testimony not based on scientific, technological or other specialized knowledge, however, is unclear. The court must reserve ruling on the admissibility of Norcross' lay opinion testimony until trial. The parties will not refer to Norcross' opinions in opening statements, through questioning witnesses, or otherwise in the jury's presence without prior court authorization.

C. Expert Testimony of Breidenthal

1. Liquid Dynamics' Arguments

*4 Liquid Dynamics seeks to exclude the testimony of Dr. Robert Breidenthal, an expert witness who submitted two reports on Vaughan's behalf and was deposed during discovery. Liquid Dynamics contends Breidenthal's opinions regarding patent validity and infringement should be barred because they are based on an improper claim construction rejected by the Federal Circuit. Liquid Dynamics argues Breidenthal's opinions are expressly based on an interpretation requiring the claim term "substantially helical" to conform to Figure 6 of the '414 patent. In contrast, the Federal Circuit construed the term "substantially helical" to encompass "all flow patterns that are generally, though not necessarily perfectly, spiral and that fill much, though not necessarily all, of the tank's volume." *Liquid Dynamics*, 355 F.3d at 1369. This construction expressly rejected any claim construction requiring the nearly perfect helix portrayed by Figure 6. The Federal Circuit held it is inappropriate to rely "on the written description of Figures 5 and 6 to import the limitation of a perfectly helical flow. There is no language in the claim requiring such a perfectly helical flow." *Id.* at 1368. Liquid Dynamics argues Breidenthal's two opinions and deposition testimony clearly illustrate his reliance on Figure 6 in his assessment of the Vaughan systems. According to

Liquid Dynamics, Breidenthal's reliance on a false premise taints all of his disclosed opinions and renders them irrelevant and inadmissible.

2. Vaughan's Arguments

Vaughan responds that Breidenthal may be called to testify to: (1) the teachings of the '414 patent to one of ordinary skill in the art; (2) whether the teachings of the patent provide information sufficient for one of ordinary skill in the art to practice the invention claimed, and specifically, to create in a storage tank the helical flow pattern required by the claims; and (3) whether the evidence proffered by Liquid Dynamics demonstrates all limitations of the '414 patent's claims. Vaughan argues Breidenthal's opinions are based on his review of the patent's teachings and the language of the patent claims. His opinions do not require strict adherence to the structure of Figure 6. Instead, Breidenthal's opinions recognize Figures 5 and 6 illustrate desirable flow patterns and describe a preferred embodiment. His opinion, whether the patent includes a description sufficient to teach one of ordinary skill in the art how to practice the invention, is independent of flow pattern. Breidenthal concludes the patent does not teach how to achieve any specified flow pattern let alone a substantially helical one. Because Breidenthal's opinions are not premised on an understanding that "substantial helical flow" requires precise adherence to Figure 6, his testimony is not rendered irrelevant or inadmissible by the Federal Circuit's claim construction.

3. Findings

Vaughan asked Breidenthal to opine whether: (1) the teachings of the '414 patent enable one skilled in the art to practice the invention; (2) Vaughan's configuration infringed the '414 patent's claims; and (3) Liquid Dynamics' experts Lueptow and Gillette properly construed the '414 patent claims. Breidenthal clearly relied on Figure 6 to answer those questions. His March 29, 2002 letter to Vaughan's counsel indicates Figures 5 and 6 represent "desirable flow patterns," and "the pitch of the helical flow pattern of FIG. 6 is presumably influenced by the ratio of the net radial to the net azimuthal momentum. The patent offers no teaching here." Breidenthal concludes the patent does not teach a specified flow pattern, particularly a substantially helical one. He further asserts a central issue to the infringement question concerns the helical flow path described in Claims 1 and 8, and states:

*5 Claim 1 refers to "a substantial helical flow path" and Claim 8 refers to "a substantially helical

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flow path." FIG. 6 illustrates a flow path where a fluid element completes 14 orbits about the minor axis over about half of a full torus. Thus FIG. 6 teaches that the helix should have a fine pitch, with many orbits about the minor axis during one rotation about the major axis. From FIG. 6, I estimate that the ratio of the characteristic transverse speed V to the characteristic azimuthal speed U is approximately 18. The transverse component completely dominates the azimuthal component of the flow. Therefore, the helix described by the Claims 1 and 8, is substantial.

Breidenthal then compares CFD simulations to Figure 6 of the '414 patent:

Computational fluid dynamics simulations of Vaughan configurations by ADA Technology yield predicted particle trajectories that do not resemble FIG. 6 ... This is evident in a comparison between FIG. 6 of the '414 patent and VA 2880-2891. The basic shapes of the flow paths are completely different. The Vaughan flows shown in these computations do not exhibit a substantial helix, in my view.

Breidenthal's April 20, 2002 letter to Vaughan's counsel comments:

I believe one of average skill in the art would consider a "substantially helical flow path" that "substantially" fills the volume to imply a predominantly helical flow throughout most of the volume, as indicated in FIG. 6 of the '414 patent. In my view, none of the figures in Professor Lueptow's report resemble FIG. 6 of the '414 patent

At his deposition, Breidenthal testified "the term substantially helical implies something like figure six ..." and admitted he compared various Vaughan flows to Figure 6. Breidenthal Dep. at 88, 90, 95-96.

Breidenthal relied on Figure 6 to opine on enablement; he concluded the patent does not teach how to achieve the results portrayed by Figure 6. He relied on Figure 6 to determine infringement; he concluded Vaughan's systems did not resemble Figure 6. He relied on Figure 6 to rebut Lueptow and Gillette's opinions; he concluded none of their figures resembled Figure 6. Vaughan argues that although Breidenthal relied on Figure 6, he did not require "strict conformance," rather he required "substantial" conformance because he used flexible phrases such as "*desirable* flow pattern," "*resemble* Figure 6," "*something like* ... Figure 6," and "*basic shapes* of the flow paths." Vaughan contends the use of these phrases indicates he understood the claim words must be read in light of their ordinary meaning, an approach consistent with the

Federal Circuit's holding.

Irrelevant evidence is not admissible. Fed.R.Evid. 402. Relevant evidence is defined as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Fed.R.Evid. 401. Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, waste of time, and jury confusion. Fed.R.Evid. 403. Breidenthal's opinions rely extensively on Figure 6. In light of the Federal Circuit opinion, any probative value of Breidenthal's opinion is outweighed by the danger of unfair prejudice and jury confusion. Accordingly, the motion *in limine* to exclude Breidenthal's expert testimony must be granted.

D. Testimony of Attorney Sandler

1. Liquid Dynamics' Arguments

*6 Liquid Dynamics seeks to exclude testimony from Ronald Sandler, Vaughan's patent attorney, who is offered to opine on the issue of materiality in support of Vaughan's inequitable conduct defense. Vaughan offers Sandler's testimony that the sale of a sludge storage tank to a city in Indiana was material prior art that should have been disclosed during prosecution of the '414 patent. Liquid Dynamics argues Sandler needs a technical background in the relevant art, specifically fluid dynamics and waste treatment systems, to testify on materiality. Liquid Dynamics bases its argument on *Baxter Int'l v. McGaw, Inc.*, 149 F.3d 1321, 1328 (Fed.Cir.1998) (materiality is "judged based upon the overall degree of similarity between the omitted reference and the claimed invention in light of the other prior art before the examiner"). Liquid Dynamics asserts Sandler admittedly does not have a technical background in the relevant art. In addition, because two of his three opinion letters were disclosed on an untimely basis, his opinion should be barred under Fed.R.Civ.P. 26(a) and 37(c)(1). Finally, Liquid Dynamics argues at a minimum Sandler's testimony should be heard by the court outside the jury's presence because inequitable conduct is an issue for the court, not the jury, to decide. *Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.*, 984 F.2d 1182, 1190 (Fed.Cir.1993).

2. Vaughan's Arguments

Vaughan responds Sandler, a former examiner for United States Patent and Trademark Office and a

patent attorney with 40 years of practical experience prosecuting patent applications, would provide expert opinion testimony relevant to the determination of whether a "reasonable patent examiner" considers certain prior art references material. *Molins PLC v. Textron*, 48 F.3d 1172, 1179 (Fed.Cir.1995) ("information is 'material' when there is a substantial likelihood that a reasonable examiner would have considered the information important in deciding whether to allow the application to issue as a patent"). Vaughan asserts Sandler is not offered for his expertise in the technical field; rather, he is offered for his expertise and knowledge as an attorney and former patent examiner under Fed.R.Evid. 702. Vaughan further asserts its original disclosure of Sandler's expert report was timely. Sandler however, on his own volition, sent two rebuttal letters to Vaughan's litigation counsel responding to Liquid Dynamics' expert rebuttal reports. Vaughan states its counsel did not request the additional letters and produced them, not for the purpose of injecting untimely testimony, but out of an obligation to supplement discovery. Further, the letters do not offer new opinions. Rather, they reinforce Sandler's original opinions and reflect statements Sandler would make on cross or re-direct examination regarding Liquid Dynamics' rebuttal opinions. Vaughan argues there is no prejudice to Liquid Dynamics if the statements are offered at trial in strict rebuttal to cross-examination. Finally, Vaughan contends patent lawyers regularly testify at trial and patent legal experts are routinely allowed to offer expert opinion testimony on whether undisclosed prior art references are material. See e.g., *Yarway Corp. v. Env. Control USA, Inc.*, 775 F.2d 268, 274 (Fed.Cir.1985); *Hebert v. Lisle Corp.*, 99 F.3d 1109, 1115 (Fed.Cir.1996).

3. Findings

*7 Sandler's testimony is not clearly inadmissible for all purposes. A patent lawyer may testify in a patent suit. *Endress + Hauser, Inc., v. Hawk Measurement Sys. Pty, Ltd.*, 122 F.3d 1040, 1042 (Fed.Cir.1997). Sandler's lack of technical expertise goes to the weight of his testimony as opposed to its admissibility. Indeed, the court has discretion to adopt the legal opinion as its own, find guidance from it, or disregard it completely. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 983 (Fed.Cir.1995). As a former patent examiner, his testimony is relevant to the "reasonable patent examiner" standard as applied to the materiality of undisclosed prior art. Moreover, Vaughan has asserted justification for producing two of Sandler's three opinion letters after the deadline for expert reports passed, and acceptable reasons why Liquid Dynamics

will not be prejudiced if the letters are not excluded. Liquid Dynamics has been in possession of the two letters for years and the contents are not a surprise. The motion *in limine* must be denied.

However, "a patent case is complex and confusing enough for a jury without infusing evidence which has no relevance to the issues to be decided by that jury." *THK Am., Inc. v. NSK, Ltd.*, No. 90 C 6049, 1996 U.S. Dist. LEXIS 226, *4 (N.D.Ill. Jan. 9, 1996). Because evidence of inequitable conduct is effectively evidence of fraud, there is a danger the evidence will unnecessarily "spill over" to Liquid Dynamics' prejudice on issues that *are* before the jury. *Id.* at *4-5. For this reason, Sandler's testimony will be heard by the court outside the jury's presence. Counsel shall not refer to Sandler's testimony in the jury's presence.

E. Reliance on Prior Art References and Testimony

1. Liquid Dynamics' Arguments

Liquid Dynamics asserts Vaughan recently produced a list of 70 prior art references that Vaughan may rely on at trial to show invalidity of the '414 patent. Liquid Dynamics argues that to rely on the prior art references, Vaughan must present expert testimony explaining element-by-element how each reference anticipates the '414 patent. However, Vaughan has not properly disclosed a witness skilled in the art to provide an explanation for each reference or the substance of purported testimony. The five individuals disclosed by Vaughan are: (1) Prakash Bathija, an author on one article; (2) Eric Mandt, an inventor on eight patents; (3) Mark Crump, an officer of Liquid Dynamics and inventor of the '414 patent; and (4)-(5) Glen Dorsch and Ken Norcross, whose proposed opinion testimony was previously stricken by the court. Specifically, Liquid Dynamics contends Bathija and Mandt were not disclosed as experts and Vaughan never disclosed the substance of their opinion testimony. Their testimony was therefore not timely disclosed. Crump is not an expert and at best may have personal knowledge of a few, but not all, references. Finally, the Dorsch and Norcross testimony was excluded as untimely pursuant to the court's June 22, 2002 order.

2. Vaughan's Arguments

*8 Vaughan argues the notice produced was required pursuant to 35 U.S.C. § 282, mandating disclosure of prior art documents and witnesses at least 30 days before trial. In any event, Vaughan contends all

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references of prior art in the notice were disclosed over two years ago during the original discovery period. Further, Vaughan contends Liquid Dynamics' position that "expert opinion" testimony is required for Vaughan's invalidity counterclaim is not supported by case law. Prior art documents may be explained by witnesses having personal knowledge of the prior art installations. Vaughan contends witnesses having personal knowledge of facts are sufficient because the technology of this case is relatively simple; all prior art references are easy to understand and consist mostly of drawings showing storage tanks and flow generators within the tanks. Therefore, expert opinion testimony is not required for the jury to appreciate whether a document shows the structural features as claimed in the '414 patent. The witnesses identified may be relied upon as prior inventors or as having personal knowledge of prior art.

3. Findings

Liquid Dynamics' motion places substantial reliance on *Koito Mfg. Co., Ltd., v. Turn-Key-Tech, LLC*, No. 03-1565, 2004 U.S.App. LEXIS 17896, *20-25 (Fed.Cir. Aug. 23, 2004). In *Koito*, the Federal Circuit reversed the district court's denial of Turn-Key's motion for judgment as a matter of law with respect to anticipation and obviousness. In denying Turn-Key's motion, the district court relied solely on Koito's reference to another patent application, the JP '082. Koito offered evidence of the JP '082 reference, but did not provide any testimony or other evidence that would "demonstrate to the jury how that reference met the limitations of the claims in the ... patent, or how the reference enabled one of ordinary skill in the art to practice the claimed invention." *Id.* at *21-22. Indeed, Koito never mentioned that reference at trial after submitting it into evidence. The Federal Circuit held the district court erred in finding Koito had provided substantial evidence to support the jury's finding of obviousness based solely on its evidence regarding the JP '082 reference. "We have consistently explained what is necessary to show anticipation by a given reference. Typically, testimony concerning anticipation must be testimony from *one skilled in the art* and must identify each claim element, state the witnesses' interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference. The testimony is insufficient if it is merely conclusory." *Id.* at *23 (emphasis added).

Koito rejected the notion that explanatory testimony relating to the JP '082 reference was unnecessary based on *Union Carbide Corp. v. American Can Co.*, 724

F.2d 1567 (Fed.Cir.1991). *Id.* at *24, n. 4. In *Union Carbide*, the alleged infringer did not provide explanatory testimony regarding prior art references. However, the references and the patent, a simple method of dispensing plastic bags, were easily understandable and the patentee, instead of the infringer, provided explanatory analysis regarding prior art references. The patent in *Koito*, which taught a method of strengthening injection-molded plastics by cross-laminating layers of plastics, was "not an easily understandable patent," and therefore needed some explanatory testimony or other evidence to compare the prior art with the patent at issue.

*9 The court disagrees with Vaughan's assertion that the '414 patent is relatively simple because it relates to an apparatus for mixing sludge or slurry in a large storage tank. The '414 patent involves significant scientific and technical information that may not be easily understandable to the jury. Moreover, Vaughan relies on *Union Carbide* to support its assertion that expert testimony is not necessary when a patent is simple. Even in *Union Carbide*, where the expert testimony was not necessary due to the simplicity of the patent, the patentee presented explanatory testimony. In any event, to prove anticipation or obviousness, Vaughan must provide testimony "from *one skilled in the art* and must identify each claim element, state the witnesses' interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference." *Koito* at *23 (emphasis added). The concept "one skilled in the art" is a theoretical construct used to determine obviousness. It does not necessarily refer to a particular individual or an expert. *Endress*, 122 F.3d at 1042. An expert witness may not always be one skilled in the art, and one skilled in the art may not necessarily be an expert witness. *Id.*; see also, *Dayco Prods. v. Total Containment, Inc.*, 258 F.3d 1317, 1324 (Fed.Cir.2001) ("our objective is to interpret the claims from the perspective of one of ordinary skill in the art, not from the viewpoint of counsel or expert witnesses"). Liquid Dynamics' argument that Vaughan must present "expert testimony" for explanation is incorrect. None of the identified witnesses may testify as experts. However, if Vaughan proffers appropriate foundation establishing Mandt, Dorsch, Norcross and Crump are skilled in the art, they may testify about their personal knowledge of prior art. The motion *in limine* must be denied.

III. Vaughan's Motions *in Limine*

A. Willful Infringement

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1. Vaughan's Arguments

Vaughan seeks to bar any testimony relating to Liquid Dynamics' claim of willful infringement. According to Vaughan, Liquid Dynamics' complaint and exhibit list show Liquid Dynamics' intent to establish Vaughan willfully infringed at least one claim of the '414 patent. Vaughan argues the state of mind of its decisionmakers is irrelevant because, as a matter of law, there can be no finding of willful infringement. Vaughan argues this court's grant of summary judgment and the Federal Circuit's dissenting opinion establish Vaughan has a substantial defense to infringement. According to Vaughan, the existence of a substantial defense establishes it had a good faith belief it would not infringe the '414 patent and a finding of willful infringement or enhanced damages under 35 U.S.C. § 384 would be inappropriate. Therefore, testimony relating to willful infringement would be irrelevant and prejudicial because of likely jury confusion. Vaughan argues admission of willfulness testimony would force Vaughan to waive the attorney-client privilege because evidence probative of Vaughan's state of mind may require testimony from Vaughan's attorneys who advised the company as to its potential defenses. Vaughan argues the exclusion of willfulness evidence in a trial on liability may ameliorate any risk of prejudice to Vaughan.

2. Liquid Dynamics' Arguments

*10 Liquid Dynamics responds that this motion *in limine* is actually an inappropriate motion for summary judgment. Vaughan ignores cases holding that litigation history, such as this court's summary judgment decision and the appellate dissent, are not relevant to the state of mind of the infringer when the infringement began. Vaughan ignores a recent *en banc* Federal Circuit case flatly rejecting the argument that the existence of a substantial defense to infringement is *per se* sufficient to defeat liability for willful infringement. *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, No. 01-1357, 2004 U.S.App. LEXIS 19185, at *26-27 (Fed.Cir. Sept. 13, 2004). Liquid Dynamics further argues Vaughan's attorney-client waiver argument is frivolous because Vaughan already disclosed its counsel's opinion during discovery. Liquid Dynamics contends the focus of willfulness is on the infringer's mental state, not the mental state of the attorney authoring the non-infringement opinion. Therefore, a member of the litigation team is wholly unnecessary and Vaughan may use other witnesses at trial.

3. Findings

Vaughan's reliance on *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057 (Fed.Cir.2003) is misplaced. In *State Contracting*, the district court ruled at the close of trial that infringement was not willful as a matter of law. The Federal Circuit affirmed the finding because defendants had a substantial defense to infringement. *Id.* However, in *State Contracting* there was no dispute defendants acted in good faith when they infringed the patent. The facts of this case are very different. Whether Vaughan willfully violated the '414 patent is strongly contested. Even in *State Contracting*, the determination of willfulness was reserved until the end of trial. Vaughan presents no authority for excluding the willfulness issue from the trial. This court's initial grant of summary judgment and the Federal Circuit's dissenting opinion do not preclude a finding of willfulness at trial. The concept of a substantial defense to infringement providing a *per se* preclusion to a willfulness determination has been flatly rejected. *Knorr-Bremse*, 2004 U.S.App. LEXIS 19185, at *26-27. Moreover, a willfulness determination typically requires review of the "totality of circumstances" an analysis of the factual record. *Id.* Vaughan's motion is an inappropriate attempt to limit the scope of trial issues in a manner more appropriately raised in a motion for summary judgment. The motion *in limine* to exclude evidence of willfulness must be denied.

B. Infringement Under Doctrine of Equivalents

1. Vaughan's Arguments

Vaughan seeks to exclude testimony relating to infringement under the doctrine of equivalents. Vaughan argues Liquid Dynamics is subject to prosecution history estoppel due to an amendment made during the prosecution of the '414 patent that narrowed the limitation of a "substantially helical flow path." On appeal, the Federal Circuit stated "the narrowing amendments introduced during prosecution to overcome the application's obviousness in light of the prior art, however, may prevent Liquid Dynamics from using the doctrine of equivalents to claim any flows that are not substantially helical." *Liquid Dynamics Corp. v. Vaughan Company, Inc.*, 355 F.3d 1361, 1369 (Fed.Cir.2004). Further, the Federal Circuit recognized:

*11 Liquid Dynamics presumptively surrendered its rights to all flows that are not substantially helical, even if they perform the same function as a substantially helical flow. Liquid Dynamics may

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establish literal infringement of the '414 patent by showing a substantially helical flow, but it will have to overcome presumption of surrender to claim that any flow other than a substantially helical one infringes under the doctrine of equivalents.

Id., 355 F.3d at 1370 (internal citations omitted). Vaughan argues Liquid Dynamics cannot overcome this presumption of surrender because it cannot show the equivalent in question, a flow pattern that is not substantially helical, was unforeseeable at the time of the amendment. Vaughan contends the flow patterns alleged by Liquid Dynamics to be equivalent are encompassed by prior art because they are random, substantial volume-filling flows. These flow patterns were deemed unallowable in the original claims in view of the prior art that embraced those equivalents. Further, Vaughan contends the amendment requiring substantially helical flow was not merely tangential to the asserted scope of equivalents. The amendment requiring "substantial helical flow" was the essence of the invention and is the reason the claims were allowed. Finally, Vaughan argues Liquid Dynamics cannot provide a convincing reason the presumption of prosecution history estoppel should not apply, and Liquid Dynamics' decision to narrow the claims to only "substantially helical flow" is a classic example of surrender.

2. Liquid Dynamics' Arguments

In response, Liquid Dynamics argues the '414 patent's prosecution history explicitly demonstrates it did not intend to surrender any substantially volume-filling flows except those resulting in the "teacup effect." The teacup effect causes solid components to accumulate on the bottom of a tank when the contents are simply rotated. Liquid Dynamics states the prosecution history illustrates claim language was added to clarify that it was *not* claiming an arrangement of flow-generating devices resulting in flow directions that caused the teacup effect. The prosecution history emphasized the counter-teacup flow direction of the invention was being claimed, not any specific flow path. Therefore, the only territory surrendered, if any, included flow paths resulting in the teacup effect. Because the surrender of equivalents issue was not before the Federal Circuit, it did not analyze the prosecution history to address whether the presumption of surrender had in fact been rebutted and its comments regarding surrender were *dicta*. Liquid Dynamics argues it is able to rebut the presumption of surrender.

First, Liquid Dynamics asserts all teacup countering

flows were not foreseeable. Foreseeability depends on underlying factual issues; by arguing Liquid Dynamics should be precluded from presenting any evidence as to what one of ordinary skill in the art would have considered foreseeable, Vaughan improperly seeks summary judgment on the issue. Further, the prosecution history shows the reason for the amendment was tangential to the asserted equivalent because the amendment was clarifying not narrowing. The inventors amended the claims to better define the flow direction to counter the teacup effect; teacup-countering flow was not shown by the prior art. Finally, because of the shortcomings of language, the inventors could not describe all potential equivalent teacup-countering flows in the claims.

3. Findings

*12 A patent holder is protected from efforts of copyists to evade liability for infringement by making only insubstantial changes to a patented invention. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 726, 122 S.Ct. 1831, 152 L.Ed.2d 944 (2002). "The scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described." *Id.* at 732. When the extension of protection beyond the literal terms of the patent results in an unclear range of equivalents, however, competitors may not be able to determine what is permissible and what infringes. *Id.* at 726. Therefore, competitors may rely upon prosecution history. When the patentee narrows its claims to fix a rejection by the patent and trademark office, it is estopped from claiming the original, broader claim was an equivalent. *Id.* Competitors may rely on the estoppel to ensure their inventions will not be found to infringe by equivalence. *Id.* "Where the original application once embraced the purported equivalent but the patentee narrowed his claims to obtain the patent or protect its validity, the patentee cannot assert that he lacked the words to describe the subject matter in question." *Id.* at 734. "The doctrine of equivalents is premised on language's inability to capture the essence of innovation, but a prior application describing the precise element at issue undercuts that premise." *Festo*, 525 U.S. at 734-35. In other words, prosecution history estoppel prevents the doctrine of equivalents from recapturing subject matter surrendered during prosecution. *Catalina Mktg. Int'l v. Coolsavings*, 289 F.3d 801, 813 (Fed.Cir.2002).

The Federal Circuit, addressing *Festo* on remand, recognized the Supreme Court established a presumption that a narrowing amendment made for a

reason of patentability surrenders the entire territory between the original claim limitation and amended claim limitation. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1365 (Fed.Cir.2003). A patentee may overcome the presumption by showing: (1) at the time of the amendment, the equivalent was unforeseeable; (2) the rationale underlying the amendment bore no more than a tangential relation to the equivalent in question; or (3) there was some other reason suggesting the patentee could not reasonably have described the equivalent in question. *Id.* Accordingly, "the first question in a prosecution history estoppel inquiry is whether an amendment ... has narrowed the literal scope of a claim. If an amendment was not narrowing, then prosecution history estoppel does not apply." *Id.* at 1366. If the alleged infringer shows the amendment was narrowing, the question becomes whether the reason for the amendment was a substantial one relating to patentability. If not, prosecution history estoppel does not apply. If so, it is presumed that the patentee surrendered all territory between the original claim limitation and the amended claim limitation. The patentee may rebut the presumption of total surrender by demonstrating it did not surrender the particular equivalent in question by using one of the three methods outlined by the Supreme Court. *Id.* at 1366-67. If successful, prosecution history estoppel does not apply. If unsuccessful, prosecution history estoppel bars the patentee from relying on the doctrine of equivalents for the accused element. *Id.* at 1367.

*13 Rebuttal of the presumption of surrender is a question of law to be determined by the court, not the jury. *Id.* The first question in prosecution estoppel inquiry is whether the amendments narrow the literal scope of the claim. Vaughan argues Liquid Dynamics has surrendered its rights to all flows that are not substantially helical. Liquid Dynamics argues the amendments clearly indicate the inventors' intent to claim the counter-teacup flow direction of the invention, not any specific flow path. This court previously reviewed the prosecution history on summary judgment and determined:

The original application presented to the Patent and Trademark Office ("PTO") did not describe claim 1's substantial helical flow path. The PTO rejected the original application based on prior art U.S. Patents Nos. 4,332,484 and 2,552,281. In response, the patentee argued the substantial volume filling flow described in Figures 5 and 6 was possible only with their invention, not the prior art patents. The patentee submitted an amendment that substantially narrowed the '414 patent's

scope, and expressly outlined the flow pattern currently elaborated in claim 1.

Liquid Dynamics, 2002 U.S. Dist. LEXIS 14102, at *15 (emphasis added). The amendments narrowed the scope of the claim. The Federal Circuit reviewed this court's analysis of the prosecution history, explained that the original claim 1 referred only to a "flow" whereas the amended claim 1 required a "substantial helical flow path," and held the presumption of surrender had been established. *Liquid Dynamics*, 355 F.3d at 1364-65, 1369-70. Liquid Dynamics may therefore rebut the presumption of surrender using any of the three methods articulated in *Festo*.

In assessing the first method of rebuttal, whether an alleged equivalent was unforeseeable at the time of the amendment, a district court may hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries. *Festo*, 344 F.3d at 1369. "By its very nature, objective unforeseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment." *Id.* In *Festo*, the Federal Circuit determined factual issues existed relating to the objective unforeseeability of the two accused equivalents and remanded the case to the district court for determination of whether the equivalents would have been unforeseeable to a person of ordinary skill in the art at the time of the amendments. If Liquid Dynamics fails to meet its burden of rebutting the presumption of surrender under the second or third prongs, it may present factual evidence at trial regarding whether the accused equivalent, flow patterns that are not substantially helical, was foreseeable to a person of ordinary skill in the art at the time of the amendments.

Liquid Dynamics does not successfully rebut the presumption of surrender under the second scenario, whether the rationale for the amendment bore no more than a tangential relation to the equivalent in question. Rebuttal under the second method should be discernible from the prosecution history record without the introduction of additional evidence except, when necessary, testimony from those skilled in the art as to the interpretation of that record. *Festo*, 344 F.3d at 1369-70. The original '414 patent application did not describe claim 1's substantial helical flow path; the flow pattern was described through subsequent amendments. A description of the substantially helical flow path, including its counter-teacup producing direction, cannot be considered tangential to the accused equivalent: flow patterns that are not

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substantially helical. On summary judgment, this court recognized the patent's helical flow path is central to the operation of the invention and the patent was narrowed to encompass a specific type of flow pattern central to the invention. *Liquid Dynamics Corp. v. Vaughan Co.*, No. 01 C 6934, 2002 U.S. Dist. LEXIS 14102, *27-28 (N.D.Ill. July 31, 2002).

*14 Liquid Dynamics has met its burden of rebuttal under the third method. Assessment of the third rebuttal method, whether there is some other reason suggesting the patentee could not reasonably be expected to have described the equivalent in question, should be limited to the prosecution history record when possible. *Festo*, 344 F.3d at 1370. This third category is a narrow one, but it may be satisfied when there was some reason, such as the shortcomings of language, the patentee was prevented from describing the alleged equivalent when it narrowed the claim. *Id.* Liquid Dynamics asserts shortcomings of language prevented the inventors from describing every precise equivalent flow pattern, therefore the prosecution history focused on teaching flows in a different direction to counter the teacup effect. Liquid Dynamics notes the prosecution history shows the amount of detail required to describe a flow path.

The court finds Liquid Dynamics has sufficiently articulated a reason the inventors could not have reasonably described the equivalent in question. Because it was impossible for the inventors to describe all teacup-countering helical flows that might result from changing certain variables, the presumption of equivalents has been overcome. The motion *in limine* to exclude evidence of infringement under the doctrine of equivalents must be denied.

C-E. Unreliable Computer Simulations, Vector Plots and Expert Testimony Unhelpful to Trier of Fact

1. Vaughan's Motions

Vaughan's final three motions seek exclusion of expert testimony and testing. Vaughan argues Liquid Dynamics' CFD simulations do not meet minimum standards and controls as determined by the software's vendor and the relevant scientific community. Further, Vaughan asserts the simulations were performed hastily by an unskilled worker who received virtually no supervision from Lueptow. Consequently, Vaughan contends the results are not scientifically reliable and are inconsistent with independent testing. According to Vaughan, Lueptow fails to account for the discrepancies, and did not exercise the standard of care

required in his regular academic work when performing the testing. Vaughan contends Fed.R.Evid. 702 requires exclusion Lueptow's expert testimony because the opinion is based on unreliable data.

Vaughan also seeks to exclude vector plots attached to Lueptow's expert report. Vaughan contends the vector plots are two-dimensional "snap-shots" in the mixing cycle. According to Vaughan, these snap-shots are incapable of tracing the path of liquid or solid components because they lack the three-dimensional data necessary to predict the ultimate direction of flow. For instance, Vaughan asserts vector plots do not display out-of-plane components of velocity. According to Vaughan, out-of-plane components of velocity, however, often dominate the ultimate path of the particle. Vaughan argues several plots reflect zero or near-zero in-plane velocity. Accordingly, any velocity that might exist is out-of-plane and invisible on the two-dimensional plot. Vaughan contends the vector plots are misleading, and their probative value, if any, is outweighed by the potential prejudicial and confusing effect on the jury.

*15 Finally, Vaughan seeks to exclude any expert opinion testimony that will not assist the trier of fact, including: (1) all opinion testimony of Edward Gillette concerning flow paths in the accused Vaughan systems; and (2) all opinion testimony of Gillette or Lueptow based upon CFD simulations. Vaughan asserts Gillette's opinions are speculative because they are not based on testing, observation or simulation of actual Vaughan installations. Vaughan contends Liquid Dynamics' CFD simulations were performed on computer models with tank geometries and flow parameters radically different from those of the accused Vaughan systems and are therefore unreliable. Vaughan argues the testimony is therefore inadmissible under Fed.R.Evid. 702 because it will not assist the jury in determining the flow patterns of the Vaughan systems.

2. Evidence in Support of Vaughan's Motions

Liquid Dynamics submits a combined opposition to Vaughan's three motions *in limine* seeking exclusion of expert testimony and testing. The court first addresses Liquid Dynamics' arguments regarding the admissibility of evidence submitted in support of Vaughan's three motions.

Liquid Dynamics asserts that on May 1, 2002, the last day for disclosure of Rule 26(a)(2) rebuttal expert reports, Vaughan submitted a report signed by two

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employees, Dorsch and Keeran (the "Dorsch/Keeran report"). As previously discussed, Sections III and IV of the report are stricken as untimely expert opinion. The unstricken portions of the report opined on the validity of Lueptow's CFD simulations (Section I) and hypothetical alternative systems (Section II). Lueptow's testing and related testimony relates to the issue of infringement. Section I of the Dorsch/Keeran report addressed Lueptow's simulations in approximately four (4) pages of rebuttal opinion. To support its motions *in limine* challenging Lueptow's expert work and testimony, Vaughan submits two affidavits from Dorsch dated August 24, 2004 and August 26, 2004 that total 42 pages. Liquid Dynamics asserts the August 26th declaration submits new, untimely opinion testimony that: (1) Lueptow's CFD analysis is based on mixing tanks that "vary significantly in tank geometry, nozzle sizing, and nozzle placement from the actual, real world geometries and structures of the accused Vaughan systems" (Dorsch Decl. at ¶¶ 4, 6-38); (2) critique Lueptow's CFD analysis (Dorsch Decl. at ¶¶ 39, 53-58, 60, 62-65, 68, 70-74, 76 and Attachment A); and (3) characterize the factual record (Dorsch Decl. at ¶¶ 77-87). Liquid Dynamics also argues the August 24th declaration submits new, untimely opinion testimony regarding vector plots. Dorsch Decl. at ¶¶ 2-6. Further, Liquid Dynamics contends Dorsch's new opinions rely on newly disclosed materials, specifically: (1) 32 pages of new CFD plots; (2) never disclosed portions of a CFX manual; and (3) publications from the American Institute of Aeronautics and Journal of Fluids Engineering that Vaughan never produced. Finally, Liquid Dynamics asserts Dorsch improperly relies upon deposition testimony from an employee of the CFX software distributor, Mr. Paul, that occurred on the last day of discovery and over a month after the May 2002 report.

*16 Vaughan asserts Liquid Dynamics' objections to the contents of Dorsch's declarations confuse fact with opinion. Vaughan argues Fed.R.Evid. 702 and Fed.R.Civ.P. 26 anticipate an expert may testify in forms other than expert opinion, including statements of fact not within the realm of Rule 26(a) expert opinion. Vaughan asserts Dorsch's declaration does not offer a new opinion, rather it summarizes facts and reiterates opinions and conclusions set forth in the original Dorsch/Keeran report. In support of its response, Vaughan submits a third declaration from Dorsch addressing Liquid Dynamics' objections and asserting his prior two declarations did not set forth a new opinion.

The court has reviewed the May 2002 report and

Dorsch's declarations. Vaughan's attempt to submit new opinion testimony by calling it "fact" and trying to squeeze it under the parameters of generalized statements from the May 2002 report is appalling. The Dorsch affidavits are replete with inappropriate new opinions and the court will not attempt to recite it all here. As an example, however, Section I of the Dorsch/Keeran report states: "[f]or solving large tank mixing problems ... the tank and nozzle geometry must be constructed correctly ... if a problem to be solved with CFX is set up improperly, the user will get an answer that is incorrect and that may not represent what actually happens in the real world." Dorsch/Keeran Rep. at 3. The report then broadly and generally identifies four weaknesses of Liquid Dynamics' CFD studies: (1) outlet boundary condition; (2) RMS residuals (3) use of 2nd order advection scheme; and (4) mesh refinement or inflation boundaries. *Id.* at 3-6. In contrast, Dorsch's August 26th declaration states specifics, such as "the mixing tanks modeled by Jared Proctor for each of the eight categories vary significantly in tank geometry, nozzle sizing, and nozzle placement from the actual, real world geometries and structures of the accused Vaughan systems." Dorsch Decl. at ¶ 7. The precise dimensions, parameters and other physical characteristics that create, in Dorsch's view, a "huge disconnect" between Liquid Dynamics' computer models and the actual tanks is provided for the first time. In doing so, Dorsch comments:

-- The difference in nozzle diameter is "a very significant difference in light of what happens in the real world ... a reduction in nozzle diameter has a big effect on the fluid velocity;" Dorsch Decl. at ¶ 10.

-- "This is a problem for two reasons ... the velocity assumed in the model is not just wrong but wildly wrong." The model "departs radically from the real world ... a velocity and flow rate that could not physically be duplicated;" Dorsch Decl. at ¶ 12.

-- "There are a great many parameters in this summary of so-called Group A systems that are missing. These missing parameters are not simply important, but critical, to creating a reliable computer model on which to simulate flow pattern ..." Dorsch Decl. at ¶ 17.

*17 Neither the elaborate description of the alleged physical inadequacies of the models, nor the conclusions Dorsch draws about their reliability were contained in the Dorsch/Keeran report. The same is true with respect to the August 24th declaration critiquing Lueptow's vector plots. Indeed, the Dorsch/Keeran report did not even mention, let alone describe, vector plots. Further, the report did not identify

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Dorsch's reliance upon the challenged 32 pages of new CFD plots, never disclosed portions of the CFX manual and new publications.

Vaughan argues the declarations merely recite or summarize facts or reiterate opinions and conclusions disclosed in the report. Further, Vaughan argues factual, non-opinion statements of a witness are not subject to disclosure and Dorsch may testify to facts within his personal knowledge. It is disingenuous for Vaughan to assert generalized statements in the Dorsch/Keeran report, such as "the tank and nozzle geometry must be constructed correctly ...," cover his elaboration more than two and a half years after the close of discovery.

Vaughan further argues the challenged CFD plots are not new information; rather, they display in graphic form: (1) results from simulations not discussed by Lueptow; (2) compilations of data produced by Liquid Dynamics evidencing Lueptow's lack of concern for his underling's work; and (3) summaries of streamline plots that could not have been generated at the time of the Dorsch/Keeran report. This is unacceptable. Expert reports must contain the data or other information considered by the witness in forming opinions, as well as any exhibits to be used as a summary of or support for the opinions. Fed.R.Civ.P. 26(a)(2)(B). Dorsch may not opine or offer "facts" to rebut the reliability of Lueptow's methods, models, data and conclusions beyond the original Dorsch/Keeran report. Failure to comply with Rule 26 precludes a party from using expert testimony that was not timely or fully disclosed. *Finley v. Marathon Oil Co.*, 75 F.3d 1225, 1230 (7th Cir.1996). Vaughan's attempt to circumvent the requirements of Fed.R.Civ.P. 26(a)(2) must fail. The following new opinion testimony is disregarded: August 26th Declaration ¶¶ 4, 6-39, 53-58, 60, 62-65, 68, 70-74, 76-87 and Attachment A; August 24th declaration ¶¶ 2-6; newly cited portions of the CFX manual, and newly cited publications.

3. Disposition of the Motions

Even if the court did not disregard the challenged portions of Dorsch's affidavits, the remaining motions *in limine* would be denied. First, Vaughan's challenges to Liquid Dynamics' application of the CFD technology must fail. Fed.R.Evid. 702 provides the standard for admitting expert scientific testimony in a federal trial. See *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). District courts are obligated to prevent unreliable expert testimony from admission. This obligation,

however, does not include determination of whether the expert opinions are correct; rather the court's obligation is to examine the reliability of the expert's methodology. *Id.* at 593-96; *Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd.*, 326 F.3d 1333, 1340-44 (11th Cir.2003), citing *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 153-54, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999). The Supreme Court set forth five factors to guide a court in assessing the reliability of scientific expert testimony: (1) "whether a theory or technique ... can be (and has been) tested;" (2) "whether the theory or technique has been subjected to peer review and publication;" (3) "the known or potential rate of error;" (4) "the existence and maintenance of standards controlling the technique's operation;" and (5) whether the technique or method has met with general acceptance. *Id.* at 593-94. The CFD methodology is not at issue. Courts have affirmed the reliability of CFD methodology. See *Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd.*, 326 F.3d 1333, 1343-44 (11th Cir.2003); *Buckley v. Airshield Corp.*, 116 F.Supp.2d 658, 661 (D.Md.2000); *Flomerics, Ltd. v. Fluid Dynamics, Int'l, Inc.*, 880 F.Supp. 60, 61-63 (D.Mass.1995). Vaughan does not dispute that CFD analysis is a reliable, scientific methodology. Indeed, Vaughan's own experts conducted CFD analysis. Instead, Liquid Dynamics' application of that methodology is challenged. The application of a reliable methodology goes to the evidence's probative value, however, not admissibility. *Quiet* at 1343-46. Challenges addressing flaws in the expert's application of a reliable methodology should be raised on cross-examination. *Daubert*, 509 U.S. at 596 ("vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of challenging shaky but admissible evidence"); see also *Quiet*, 326 F.3d at 1344-45.

*18 Second, Vaughan's challenges to Lueptow's vector plots must fail. Vaughan challenged the admissibility of Lueptow's vector plots on appeal. In its opinion, the Federal Circuit noted Vaughan's challenge to the vector plots' reliability, yet held Liquid Dynamics' evidence might convince a jury the patent was infringed. *Liquid Dynamics*, 355 F.3d at 1369. In any event, Vaughan has failed to demonstrate the vector plots are unreliable and inadmissible for all purposes.

Finally, Vaughan's challenges to Gillette's testimony must fail. A witness may qualify as an expert by knowledge, skill, experience, training, or education. Fed.R.Evid. 702. Gillette's *curriculum vitae* illustrates he has extensive experience in the field of sanitary

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engineering. Gillette considered testing conducted by Lueptow and voluminous documentation to formulate his opinions. An expert may consider testing of another expert in formulating opinions. *Walker v. Soo Line R.R.*, 208 F.3d 581, 589 (7th Cir.2000). Gillette's testimony is not inadmissible for all purposes. Vaughan's motions *in limine* to exclude computer simulations, vector plots and expert testimony must be denied.

CONCLUSION

Liquid Dynamics' motions *in limine* to limit testimony of defendant's experts to properly and timely disclosed opinions, to exclude undisclosed and untimely expert testimony of Norcross and Bathija, and to exclude Sandler's testimony are granted in part and denied in part. Liquid Dynamics' motion *in limine* to exclude Breidenthal's testimony is granted. Liquid Dynamics' motion *in limine* to exclude reliance on prior art references and related testimony is denied. Defendants' motions *in limine* are denied.

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Motions, Pleadings and Filings (Back to top)

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. 2004 WL 2256986T1 (Trial Motion, Memorandum and Affidavit) Vaughan's Reply in Support of its Motion for the Court's Ruling on Pending Summary Judgment Motions (Jul. 28, 2004)

. 2002 WL 32678312T1 (Trial Motion, Memorandum and Affidavit) Plaintiff's Response to Vaughan's Motion for Taxation of Costs (Sep. 03, 2002)

. 2002 WL 32678306T1 (Trial Motion, Memorandum and Affidavit) Reply of Defendant Vaughan to Plaintiff's Combined Opposimon to Defendant's Motions for Summary Judgment (Jul. 11, 2002)

. 2002 WL 32678302T1 (Trial Motion, Memorandum and Affidavit) Plaintiff's Response to Defendant's Motion for Interpretation of Patent Claim Terms (Jul. 03, 2002)

. 2002 WL 32387954T1 (Trial Motion, Memorandum and Affidavit) Notice of Filing (May. 22, 2002)

. 2002 WL 32924566T1 (Expert Report and Affidavit) Declaration of Glenn R. Dorsch (May. 22, 2002)

. 2002 WL 32924755T1 (Trial Motion, Memorandum and Affidavit) Vaughan's Opposition to Plaintiff's Motion to Exclude the Dorsch/Keeran Expert Report (May. 22, 2002)

. 2002 WL 32387965T1 (Trial Motion, Memorandum and Affidavit) Plaintiff's Disclosure of New Facts in Support of its Motion to Exclude Expert Testimony Proffered By Defendant Which is Untimely and Barred by Daubert and Kumho Tire (May. 20, 2002)

. 2002 WL 32388039T1 (Trial Pleading) Plaintiff's Reply to Defendant's Counterclaims (May. 20, 2002)

. 2002 WL 32678297T1 (Trial Motion, Memorandum and Affidavit) Plaintiff's Reply to Defendant's Counterclaims (May. 20, 2002)

. 2002 WL 32388042T1 (Trial Pleading) Notice of Motion (May. 16, 2002)

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. 2002 WL 32388029T1 (Trial Pleading) Notice of Filing - First Amended Answer, Affirmative Defenses, Counterclaim and Jury Demand (May. 09, 2002)

. 2002 WL 32678290T1 (Trial Pleading) First Amended Answer, Affirmative Defenses, Counterclaim and Jury Demand (May. 09, 2002)

. 2002 WL 32387961T1 (Trial Motion, Memorandum and Affidavit) Notice of Filing (Apr. 26, 2002)

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. 2002 WL 32387953T1 (Trial Motion, Memorandum and Affidavit) Memorandum in Support of Plaintiff's Motion to Dismiss Defendant's New Affirmative Defense of Inequitable Conduct for Waiver (Apr. 11, 2002)

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and Affidavit) Memorandum in Support of Plaintiff's Motion to Dismiss Defendant's New Affirmative Defense of Inequitable Conduct for Waiver (Apr. 11, 2002)

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. 2002 WL 32678282T1 (Trial Motion, Memorandum and Affidavit) Plaintiff's Reply to Defendant's Response and Opposition to Plaintiff's Motion to Compel Under Fed.R.Civ.P.37 (Mar. 04, 2002)

. 2002 WL 32387959T1 (Trial Motion, Memorandum and Affidavit) Notice of Filing (Mar. 01, 2002)

. 2002 WL 32678278T1 (Trial Motion, Memorandum and Affidavit) Defendant's Response and Opposition to Plaintiff's Motion to Compel (Mar. 01, 2002)

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. 2001 WL 34396095T1 (Trial Pleading) Answer to Complaint, Affirmative Defenses and Jury Demand (Oct. 05, 2001)

. 2001 WL 34667343T1 (Trial Pleading) Answer to Complaint, Affirmative Defenses and Jury Demand (Oct. 05, 2001)

. 2001 WL 34396097T1 (Trial Pleading) Complaint (Sep. 06, 2001)

. 2001 WL 34667337T1 (Trial Pleading) Complaint (Sep. 06, 2001)

. 1:01cv06934 (Docket) (Sep. 06, 2001)

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